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March 23, 2004, 18:13:48; Search time 13687 Seconds (without alignments) 11466.729 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	1974 AR123974 1173 AR213177 18548 AR2131854 2276 AR127127 1145 AX127127		AF262949 BEA6128 BEA6128 BEA6128 BEA6134 U000029 AE0000099 AE0000099 AE0016852 AE016852 AE016859 AE01687	1GNMENTS 21 bp DNA linear E 6171833. and Willis, L.B. corynebacterium glutamicum
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13621 /organism="unknown" /mol_type="unassigned DNA"	100.0%; Score 3621; DB 6 imilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches C	SGGGTTAGATCCTGG	TGGGGGGGGTTAGATCCTGGGGGGTTTATTTCATTC	TCAGGGGAGTGTTGCCCGAAAACATTGAGAGGAAAACA	ggagtgcccgaaacattgaga	AATCGGGGGTTACGATACTAGGACGCAGTGACTGCTA1	AArceeeerracearacraeeacecaereacrecra	AAAGGAATAATTACTCTAGTGTCGACTCACACATTTT	Ü	ATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCCGTGC	ATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCGTG	GGTGCAGCCACGGTAGCTATTTACCCCCGTGAAGATCC	GGTAGCTATTTACCCCCGTGAAGAT	GCTTCTGAAGCTGTCCGCATTGGTACCGAAGGCTCAC	retccccatigetacccaagectca	GATGAAATTATCGGTGCAGCTAAAAAAGTTAAAGCAG	GATGAAATTATCGGTGCAGCTAAAAAAGTTAAAGCAG	TTCCTGTCTGAAATGCCCAGCTTGCCCGCGAGTGTG	ricciercidadarecedecirecededagiere	GGCCCAACCCCAGAGGTTCTTGATCTCACCGGTGATA	GGCCCAGAGGTTCTTGATCTCACCGGTGATA	AAGAAGGCTGGTCTGCCAGTTTTGGCGGAATCCACCC	-O	GTTAAAAGCGCTGAAGGCCAGACTTACCCCATCTTTG	- 22-	GGACGCGGTATGCGTTTTGTTGCTTCACCTGATGAGC	certarectreateac	TCTCGTGAAGCTGAAGCGGCTTTCGGCGATGGCGCGG	CGTGAAGCTGAAGCGGCTTTCGGCGATGGCGC	AACCCTCAGCATATTGAAGTGCAGATCCTTGGCGATC	ccrcadcatarraagracagarccrrddo	TATGAACGTGACTGCTCACTGCAGCGTCGTCGACCAAA	AACGIGACIGCICACIGCAGCGICGICACCA	
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Db 3121 TTCCGAAGCCAACCGAAGGTTCCTCGACGCGCGCCGCACCCTCGGCG 3180	RESULT 2 AR213173 LOCUS DEFINITION Sequence 1 from patent US 6403351. ACCESSION AR213173 VERSION AR213173 VERSION AR213173. GI:23310240 KEYWORDS SOURCE ORGANISM Unknown. ORGANISM Unclassified. TITLE Pyruvate carboxylase polypeptide from Corymebacterium glutamicum JUTRHORS SINSKey,A.J., Leesard,P.A. and Willis,L.B. TITLE Pyruvate carboxylase polypeptide from Corymebacterium glutamicum JOURNAL Patent: US 6403351.A 11-UNW-2002; FRATURES SOURCE SOURCE (ACCESSION AR213173.1 GI:23310240 AUTHORS SINSKey,A.J., Leesard,P.A. and Willis,L.B. AUTHORS SINSKEY,A.J. and Willis,L.B. AUTHORS	Query Matc Best Local Matches 36	AGATCCIGGGGGGTTTATTTCATTCACTTTGGCTTGAAGTCGTGGGGGGGTTTATTCATTTGGCTTTGGGGGGGG	OY 121 AATCGGGGGTTACGATACTAGGACGCAGTGACTGCTATCACCCTTGGCGGTCTCTTGTTG 180 121 AATCGGGGGTTACGATACTAGGACGCAGTGACTGCTATCACCCTTGGCGGTCTCTTGTTG 180 OY 181 AAAGGAATAATTACTCTAGTGTCGACATCACACATCTTCAACGCTTCCAGCATTCAAAAG 240
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Corynebacterium glutamicum
Corynebacterium glutamicum
Bacteria; Actinobacteria; Actinomycetales;
Corynebacterineae; Corynebacterium.
1 (bases 1 to 3637)
2 Koffas M.A., Ramamoorthi, R., Pine, W.A., Sinskey, A.J. and
Stephanopoulos, G.
Sequence of the Corynebacterium glutamicum pyruvate carboxylase
GCTGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAATCACTGCTTCT
                                                                                                           GTTGACGGCAAAATCGATCGCGTTGTGTGCTTCCTGCTGCAACGAAGGTGGAAGGTGCGAC
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Koffan, M.A.C., Ramamoorthi, R., Pine, W.A., Sinskey, A.J. and Stephanopoulos, G.

Direct Submission

Submitted (14-DEC-1997) Chemical Engineering, Massachusetts

Institute of Technology, 77 Massachusetts Avenue, Cambridge, 02139, USA
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291 TCCCAAATTCTTCACCATCTCTCCCCCCCCCCCCCCCC	RESULT 7 A97276 LOCUS DEPTNITION Sequence 1 from Patent W09918228. ACCESSION VERSION A9726.1 GI:6780661 KEYWORDS SOURCE ORGANISM unidentified ORGANISM Unidentified ORGANISM UNIDENSIFIED AUTHORS AUTHORS AUTHORS FEETER-HOOP FOR MINO ACIDS OF THE ASPARTATE AUTHORS FEATURE AND/OR GIUTAMATE FAMILY AND AGENTS WHICH CAN BE USED IN SAID METHOD JOURNAL PATENT PETERS (DE): EIGHANNIS BERND (DE) FEATURES SOURCE AUGUSTION OF MINO ACIDS OF THE ASPARTATE AUTHORS I. 3728 I. 3728 ORIGIN AND/OR GIUTAMATE FAMILY AND AGENTS WHICH CAN BE USED IN SAID METHOD AUGUST AND/OR GIUTAMATE FAMILY AND AGENTS AND/OR GIUTAMATE FAMILY
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Actinobacterium glutamicum of amino acids of the aspartate and/or glutamate family and agents which can be used in said method pattent: UP 2002508921-A 1 26-MAR-2002;
PC Corynebacterium glutamicum
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               ACAAGGGCCATGTTGCTGCACCATTGCTGGTGTTGTCACTGTGACTGTGACTGTGCTGAAGGT
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Corynebacterineae, Corynebacteriaceae, Corynebacterium.
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Novel polymucleotides
Patent: BP 1009790-A 765 20-JUN-2001;
XYOWA HAKKO KGYO CO., LTD. (JP)

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Best Local Similarity 100.0%; Pred. No. 0;
Matches 3420; Conservative 0; Mismatches

    .3420
    /organism="unidentified"
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                          /note="unnamed protein product"
/codon_start=1
/trans1_table=11
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Patent: WO 0231158-A 1 18-APR-2002;
ARCHER-DANIELS-MIDLAND COMPANY (US)
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Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
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Sequence 1 from Patent W00231158.
AX453601 GI:21712841
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267 120 327 180 387 240 447 300 507 360 567 420 627 480 687 540 747

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Beet Local Similarity 99.6%; Pred. No. 0; Macches 3427; Conservative 0; Mismatches 3477; Indels 0; Gaps 0; Macches 3427; Conservative 0; Mismatches 3477; Indels 0; Gaps 0; Mismatches 3427; Conservative 0; Mismatches 3477; Conservative 0; Mismatches 3477; Conservative 0; Mismatches 3477; Mismatches 0; Mismat	601 CCIGATGACTCCGCAATTGGCAACGAACTCTCGTGAAGCTGAAGCGCATTCGGC 808 GATGGCGCGTATATGGCAACGAACGAACTCTCGTGAAGCTGAAGCGCATTCGGC 61 GACGGTTCGGTATATGTCGAACGTGCTGATTAACCCTCAGCATATTGAAGTGCAGATC 62 GACGGTTCGGTATATGTCGAACGTGCTTTATGAACGTGCACATTCAGATCCTCAGATC 721 CTTGGCGATCGACTGGAAAGTTGTACACCTTTATGAACTGCTCACTGCAGATC 722 CTTGCCGATCGACATGGAAAGTTGTACACCTTTATGAACTGCTCACTGCAGATC 723 CTTGCCGATCGACAAATTGCGCCAGCACATTTATGAACTTCACTGCTGAT 724 CTTGCCGATCGAAAAGTTGTACACCTTTATGAACTTGGATCACTGCGTGAT 725 CGTCACCAAAAGTTGTGCGCAGCCAGCACATTTGGATCACTGCGTGAT 726 CGTCACCAAAAGTTGTGCGCCAGCACACATTTGGATCCAGGCGCGGGGAT 727 CTTGCGGATGAAAAGTTCTGCCCAGCACATTTGGATCCAGGCGCGGGAACC 728 CGCATTTGTGCGAAATTGCGCCAGCACACATTTGGATCACAGGCGCGGGAACC 729 CGCATTGTGCGAATGAAGATTCTGCCCGCTCCATTGGATACCAGGCGCGGGAACC 720 GTGGAATTCTTGGATGAAAGTTCTGCCGCTCCATTGGATACCAGGCGCGGGAACC 721 GTGGAATTCTTGGTCGAAAAGTTCTGCCGCTCCATTGGTTACCAGGCGCGGGGAACC 720 GTGGAATTCTTGGTCGAAAAGACCACGCTCCATTGGTTACCAGGCGCGGGGAACC 720 GTGGAATTCTTGGTCGATGAAAAGTTCTCCCGCTCCATTGGTTACCAGGCGCGGGGAACC 720 GTGGAATTCTTGGTCGATGAAAAGACCACGCTCCATTTCATCGAAATGAACCCACGTATC 721 GTGGAATTCTTGGTCGATGAAAAGACCACGCTCCATTTCATCGAAATGAACCCACGTATC 722 GTGGAATTCTTGGTCGATGAAAAGACCACGCTCCATTTCATCGAAATGAACCCACGTATC 724 GTGGAATTCTTGGTCGATGAAAAGAACCACGTTTTCATCGAAATGAAACCACCACGTATC 725 GTGTTGACCGTGACTGAAGAACCACCGTCATTTCATCGAAATGAACCCACGTATC 727 GTGTTGACCGACCTGAACAACCACGTTTTTCATCGAAATGAACCCACGTATC 727 GTGTTGTTGGTCGATGAAAAAGAACCACGTTTTTTCATCGAAATGAACCCACGTATC 727 GTGTTGTTGGTCGATGAAAAAAACAACCACGTTTTTTCATCGAAATGAACCCACGTATC 727 GTGTTGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
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2908 CCACAAAAGTACGACATCCCAGACTCTGTCATCGCGTTCCTGCGGGGGGGG	Oy 3568 GTTCCTGCTGCAACGAAGGTGGCAACTTGATCGTCCTAA 3621 Db 3421 GTTCCTGCTGCAACGAAGGTGGCAACTTGATCGTCGTCCTTAA 3474 RESULT 13 RESULT 13 AX453603 AX

2.10 MARCTICGGGGCCACCACCTCGCCCACTCGCCCACCTCCCCCCCCC
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Kawarabayasi, Y. Yamazaki, J. Hino, Y., Kikuchi, H. and Director-General of Biotechnology Center.

Direct Submission

Submitted (17-MXY-2002) Director-General of Biotechnology Center, Direct Submitted (17-MXY-2002) Director-General of Biotechnology Center; National Institute of Technology and Evaluation, Biotechnology Center; National Institute of Ferbology and Evaluation, Biotechnology Center; National Institute of Ferbology and Evaluation, Biotechnology Center; National Institute of Technology and Marshayasi, Y is officially affiliated with the National Institute of Advanced Industrial Science and Technology, Tsukuba, Ibaraki, 305-8566 Japan
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Namagishi, A. is at Tokyo University of Pharmacy and Life Science, Hachloi, Tokyo, 192-0392 Japan
Nishio, Y., Usuda, Y. and Sugimoto, S. are at the Ajinomoto Co., Inc., Kawasaki, Kanagawa, 210-8681 Japan
The other authors are at the National Institute of Technology and Location/Qualifiers

Location/Qualifiers
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Comparative Complete Genome Sequence Analysis of the Amino Acid
Replacements Responsible for the Thermostability of Corynebacterium
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Corynebacterium efficiens YS-314 DNA, complete genome, section
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Corynebacterium efficiens YS-314
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
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                                                                                                        /translation="WAHPGRIILPSGVTLSTILDRVARNLKKGLISKLSKRGPHRVMVGDLDYAGGLPGKIYTPAEGNGVPGVARGHDWKKPIKHYHQTLRHLASWGIAVAAPNTETGFLDYBRGFADLLDSALOILAGYKLGAGKYTVNPGGLGLVGHGNGGGYAVLAAANRKAVRAVGALYIPASTSPSCVDAAPVKAPGLIIGTADGMPDAGGPANVAARWGGDVYYRELDNGNQQSRSDTWATAYVAAPGLIIGTADLGMPDAGDPAKVAARWGGDVYYRELDNGNQQSRSDTWATAYVAARWGGDLARGHGAGSRSYKAFSDPEAFAKKTSYWGIDLEBEKAFPQDBSPLPFLNSN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product_malanine racemase"
/product malanine racemase"
/protein id="BAC17403.1"
/product id="BAC17403.1"
/protein id="BA
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MRYNSEQYYRRPEDRVGIQRLVERARAGEI1LPTGEVVSESRLRSLGHLLGSNDGWL
DLHHLLERDPRSNAFLHDLADLLPFGARNPLYYVLHESSYADGVVTDWAAQRVYPBAF
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LSCADEPQHEDTHQAETFRRAIDRARAGLSVPENHLCNSPATLTREDLHMDWRRPG
VACALEPIPGLDHGLRPAMFWAGAITVVKPIRKGEGTSYGLTWRAEADGFVAVVPAG
YABGVPRAAQDHLKYRUNGHDYPQVGRVCMDPPYIRCGDNPHGVTAGDBAVIFCGTGM
SATELADALAINYEVICRPTGRTVRDYTGEGK
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LAWVLIRAFGLGAGAGAGMFAGSLTSTPGMAAVVALMDPAGAGDPVIGYSLAYFGAVL
SILVAAVGAKLLKVNHTPEDREEGLTVTPEPLWKGVRIGGEJSGTIGDLFPLSGQQII
ATRIVEDPHERRLAPPTLPIRPGMEJVINGTWAVDRAIAAGGECDTRIEDVS
RFTVSNPDIVGRIVAELDPVANGFMIARIRQGDFIIVPHRDTVLNYSDRVRVVAAPGR
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LILGALNKTGPITWQLPPHANRTISTLGLALFLAGVGTSAGAGPRQALTDPQSFVYMG
VGFALTVTSALVCAVVGMMLLKLKWDESMGVAAGATTNPALISYLNDQTGTDLANRGY
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/product="putative prolyl aminopeptidase"
/protein_id="BA106.1"
/db_xref="G1:23492433"
/translation="MARPGGPTGWPDWGLTGGGPVSTRGRN_DGMTELSTTHLGELRL
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SWLKAALEHYRVVMLDQRGTGLSTPVSDRILEEHTTAEIVEYLSHLRADGIVRDCRAV
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GKTTFTQGLARGMQVRGRVTSPTFVIAREHRSEVGGPTLIHLDAYRLLGEDPDDVDSD
PIGALDSLDLDTDLDTAVVVAEWGGGLVEQITESYLLISIDRETAVTEDPESEARIFT
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'product="12AC1705.1"
'brotein' id="BAC175.1"
'db xref="c1:2492432"
'translation="MLDFLAANPLIALAVILAVGLAIGRISLFGVSLGAAAVLIVALV
'translation="MLDFLAANPLIALAVILAVGLAIGRISLFGVSLGAAAVLIVALV
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/note="CB0594, similar to AL583918-56|CAC29885.1| percent
identity: 50 in 156 aa"
/codon start=1
/transI_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /BC_number="5.1.1.1"
/note="CE0593, similar to AX063847-1|CAC25165.1| percent
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note="CE0595, similar to AX066613-1 | CAC26534.1 | percent
dentity: 41 in 530 aa"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to AX065751-1|CAC26115.1| percent
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/protein_id="BAC17404.1"
/db_xref="GI:23492431"
'product="conserved hypothetical protein"
'protein id="BAC17402.1"
'db_xref="GI:23492429"
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'note="CE0596, similar t
dentity: 79 in 430 aa"
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transl_table=1
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5737.
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/gene="alr"
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                                                                                                                 128583 GGGGTCTCGGGCGGGGGCATTCTTTTCACGGCAAGGTGGTGAAATTCCGCAAGGTCACTC
                                                                                                                                                                                                                              GGGTTACGATACTAGGACGCAGTGACTGCTATCACCCTT---GGCGGTCTCTTGTTGAAAG
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                                                                            7 GGGGTTAGATCCTGGGGGTTTATTTCACTTTGGCTTGAAGTCGTGCAGGTCAGGG
                                                                                                                                                     67 GAGIGITGCCCGAAACATIGAGAAGAAACAAAACCGAIGITIGAITGGGGGAAICGG
                                                                                                                                                                                                                                                                                                      GAATAATTACTCTAGTGGGGCTCACACATCTTCAACGCTTCCAGCATTCAAAAAGATCT
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  Length 308750;
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    DB 1;
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Score 2282.8; 1
Pred. No. 0;
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  Query Match
Best Local Similarity 77.7%;
Matches 2810; Conservative
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1310576 AGGCCCCCAAGCANTCGCCAACTCTCGAACCCCCCCCCCC	3065 GGCACCTCGACGCTGATGATTCCAAGGAACGTCGCAATAGCCTCAACCGCTGCTGTTCC 131636 CCCACCTGGATGATTCCGGGGGGGCGTCGGGGCCCCTCAACCGCCTGCTGTTCC 3125 CGAAGCCAACGGAGGTTCCTCGAGCACCGTCGCGGCTCGGCTCGCTGTTCGGCAACCCACCGACGCTCGCT
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/organism="Corynebacterium thermoaminogenes"
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                                                                                                                      131816 GIGICCACCCCGAIGGIGGICCCCCTGGAIGCGGTGTCCGAACCGGAACGAAAGGCA 131875
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                 131756 ATGACCGCGAGTTCTTCTACGGCTTGAAGGAGGGACGTGAGGAGCTGATCCGACTGACCG 131815
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                                                                                ATGTGCGCACCCCACTGCTTGTTCGCCTGGATGCGATCTCTGAGCCAGACGATAAGGGTA
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đ	3302 ATGACCGCGAGTTCTTCTACGGCTTGAAGGAGGGACGTGAGGAGCTGATCCGACTGACGG 3361
ờ	3245 AIGIGCGCACCCACTGCTTGCCTGGATGCGATCTCTGAGCCAGACGATAAGGGTA 3304
gg	3362 GIGICCACCCCGAIGGIGGICCCCTGGAIGCGGIGICCGAACCGGAIGACAAAGGCA 3421
ò	3305 TGCGCAATGTTGTGGCCAACGTCAACGGCCAGATCCGCCCAATGCGTGACCGCT 3364
QC	3422 IGCGCAACGTGGTGGTCAACGTCAACGGCCAGATCCGCCCGATCAAGGTGCGCGACCGTT 3481
ò	3365 COGTIGAGICIGICACCGCAACCGCAGAAAAGGCAGAATICCTCCAACAAGGGCCATGTIG 3424
qq	3482 CCGTGGAGTCCGTCACCGCCCACCGGGAAGGCCGATGCTACCACCAAGGGCCATGTCG 3541
È	3425 CTGCACCATTCGCTGGTGTTGTCACCGTGACTGTTGCTGAAGGTGATGAGGTCAAGGCTG 3484
qq	3542 CGGCACCATTCGCCGGTGTGGTCACCGTGACCGTCGCCGAGGGTGATGAGGCTG 3601
Š	3485 GAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAATCACTGCTTCTGTTG 3544
qq	3602 GCGACGCCGTGGCCATCATTGAGGCCATGAAGGCCACCACCACCACCACCGCGCCTGTCG 3661
È	3545 ACGGCAAAATCGATCGCGTTGTGGGTTCCTGCTGCAACGAAGGAAG
q	3662 ACGGTGTCATCGACCGCGTCGTGGTGCCCGCCGCCAAGGTCGAGGGCGGCGACGACCTCA 3721
δ	3605 TCGTCGTTTCCTA 3620
qq	3722 TCGTGGTCGTGTCCTA 3737

Search completed: March 24, 2004, 00:13:39
Job time : 13746 secs

Adb59992 Toxicity.
Adb5599 Primary r
Abb5559 Primary r
Abb19573 Drosophil
Abl10575 Drosophil
Abl20985 Drosophil
Abg70879 Listeria
Adb08195 Alloicocc
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Aca26312 Prokaryot
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Database

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Pyruvate carboxylase, expression, amino acid biosynthesis, glutamic acid, oxaloacetate, fermentation, biosynthesis, de
                                                                                                                                                                                                                                                                                                                                                                                                           Sequence encoding pyruvate carboxylase of C. glutamicum.
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                                                                           ABL20985
ABG70879
ADB01819
ADB12064
ABA90521_06
ACA36434
ABA01509
ABA01509
ABG6245 10
ABG6245 10
ACA22812
                     ADB52590
ABN96532
ABL19577
ABL19575
ABL102789
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ABS98821
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                       AAA47533 standard; DNA; 3621
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Corynebacterium glutamicum
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AAA47533;
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AAA47533
Aaf32165 Corynebac
Aad42046 Corynebac
Aca6213 DNA encod
Aah68526 C glutami
Aax24102 C. glutami
Abx52832 Corynebac
Aca79831 Prokaryot
Aca7989 Prokaryot
Aca77896 Prokaryot
Ad71418 Corynebac
Af71417 Corynebac
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                                                                                                                                                1 tgggggggggttagatcctg......tgatcgtcgtcgttcctaa 3621
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(c) 1993 - 2004 Compugen Ltd.
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                                                    nucleic search, using sw model
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AAF32165
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Perfect score:
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The pyruvate carboxylase of Corynebacterium glutamicum can be used for producing amino acids, preferably lysine and glutamic acid in industrial Novel polynucleotides encoding Corynebacterium glutamicum pyruvate carboxylase useful for industrial fermentation processes comprises specific nucleotide sequence. /*tag= a /product= "Pyruvate carboxylase" /transl_except= (pos:199. .202, aa:Met) Willis LB; Claim 3; Fig 1; Slpp; English 98WO-US027301. Sinskey AJ, Lessard PA, (SINS/) SINSKEY A J. (LESS/) LESSARD P A. (WILL/) WILLIS L B. WPI; 2000-465746/40. P-PSDB; AAB01436. 23-DEC-1998;

AAI99682 33 AAI99683 33 ACA38630

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AAF71418 AAF71417

AAF71419 AAF71420 ACA37896 ACA40756

ACA29831

Result No.

901 TATGAACGTGACTGCTCA	961	1021	Oy 1081 GICITCATGGAATGGACCCACGTA Db 1081 GICITCATCGAATGGAACCCACGTA	Qy 1141 GAGGTGGACCTGGTGAAGGCGCAGA	Oy 1201 GGTCTGACCCAAGATAAGATCAAGA	Oy 1261 GAAGATCCAAACAACGGCTTCCGCC	1321	1381		1501 TTGCGTGCGTTGCTG	1561	1621	1681	1741	OY 1801 GCAGTTACTGATACCACCTTCCGCC	1861	0y 1921 GTGAAGGCTGGGGCGGCGACCT Db 1921 GTGAAGGCTGGGGCGGCGCGACCT	Qy 1981 TGGACAGGCTCGACGAGCTGCGCC
fermentations and for replenishing oxaloacetate consumed for biosynthesis during growth. By incorporating the pyruvate carboxylase gene in	: =	Query Match Best Local Similarity 100.0%; Pred. No. 0, Matches 3621; Conservative 0; Mismatches 0, Indels 0; Gaps 0;	1 IGGGGGGGTTAGATCCTGGGGGGTTTATTTCATTCACTTTGGCTTGAAGTCGTGCAGG 60	TTGCCCGAAAACATTGAGAAAACAAAAACGATGTTTGATTGGGGG	AATCGGGGGTTACGATACTAGGACGCAGTGACTGCTATCACCCCTTGGCGGTCTCTTGTTG	AAAGGAITACTCCTAGTGTCGACTCACACATCTTCAACGCTTCCAGCATTCAAAAG	241 ATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCCTTCCGTGCTGCAGCACTCGAAACC 300 	301 GGTGCAGCCACGGTAGCTATTTACCCCCGTGAAGATCGGGGATCATTCCACGGCTCTTTT 360 	361 GCTTCTGAAGCTGTCCGCATTGGTACCGAAGGCTCACCAGGCGTACCTGGACATC 420 	421 GATGAAATTATCGGTGCAGCTAAAAAGGTTAAAGCAGATGCCATTTACCCGGGATACGGC 480 	481 TICCIGICIGAAAAIGCCCAGCTIGCCCGCAAGIGTGCGGAAAACGGCATTACTITIATI 540 	541 GGCCCAACCCCAGAGGTTCTTGATCTCACCGGTGATAAGTCTCGCGGGGTAACCGCCGCG 600 [601 AAGAAGGCTGGTCTGCCAGTTTTGGCGGAAATCCACCCCGAGCAAAAACATCGATGAGTC 660 	661 GTTAAAAGGGCTGAAGGCCAGACTTACCCCATCTTTGTGAAGGCAGTTGCCGGTGGTGGC 720 	721 GGACGCGGTATGCGTTTTGTTGCTTCACCTGATGAGCTTCGCAAATTAGCAACAGAAGCA 780 	781 TCTGGTGAAGCTGAAGCGGCTTTCGGCGATGGCGCGGTATATGTCGAACGTGCTGTGATT 840 	841 AACCTCAGCATATTGAAGTGCAGATCCTTGGCGATCACACTGGAGAAGTTGTACACCTT 900 841 AACCCTCAGCATATTGAAGTGCAGATCCTTGGCGATCACACTGGAGAAGTTGTACACCTT 900	901 TATGAACGTGACTCACTGCAGCGTCGTCACCAAAAAGTTGTCGAAATTGCGCCAGCA 960
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TTCCCGAAGCCAACCGAAGGTTCCTCCGACCACCGCTCCGCCAACACCTCTGCG 3180 1121 TTCCCGAAGCCAACACCTCTCGCGCACACCCTCTGCG 3180 1121 TTCCCGAAGCCAACCCACCCTCGCACCCTCGCCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCCTCGCTC	RESULT 2 AAF32165 standard; DNA; 3621 BP. XX X
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The present invention provides the protein and coding sequences of the Corynebacterium glutamicum pyruvate carboxylase protein. This is an enzyme in the anaplerotic pathway. It can be used in the replenishment of oxaloacetate consumed during lysine and glutamic acid production in industrial fermentation 888888

Seguence 3621 BP; 782 A; 1037 C; 1002 G; 800 T; 0 U; 0 Other;

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Pred. No. 0; Mismatches	3GGGTTTATTTCA: 3GGGTTTATTTCA:	acattgagagaa cattgagaggaa	aacgcagtgactg aacgcagtgactg	rcgactcacacat rcgactcacacat	AAATCGCGGTCC	racccccgtgaag raccccgtgaag	egtaccgaaggct egtaccgaaggct	aaaaagttaaag aaaaagttaaag	TTGCCCGCGAGT	aarcrcaccegre aarcrcaccegre	TTGGCGGAATCCA TTGGCGGAATCCA	ACTTACCCCATCT 	SCTTCACCTGATG	rrcggcgarggcg rrcggcgarggcg	cacarcerreced	CAGCGTCGTCACC
00.0%; ve 0;	GTTAGATCCTGGC GTTAGATCCTGGC	TGTTGCCCGAAA TGTTGCCCGAAA	TTACGATACTAG TTACGATACTAG	ATTACTCTAGTG ATTACTCTAGTG	GCAAACCGCGGC GCAAACCGCGGC	ACGGTAGCTATT	GCTGTCCGCATT(GCTGTCCGCATT(ATCGGTGCAGCT/ ATCGGTGCAGCT/	GAAAATGCCCAG(GAAAATGCCCAG	ccagagerrerr ccagagerrerr	GGTCTGCCAGTT GGTCTGCCAGTT	GCTGAAGGCCAG GCTGAAGGCCAG	Argcgrifight 	GCTGAAGCGGCT GCTGAAGCGGCT	CATATTGAAGTG CATATTGAAGTG	GACTGCTCACTG
Similarity 1	TGGGGCGGG TGGGGCGG	TCAGGGGAG TCAGGGGAG	AATCGGGGG AATCGGGGG	aaaggaata aaaggaata			GCTTCTGAA GCTTCTGAA	GATGAAATT GATGAAATT	TTCCTGTCT TTCCTGTCT	GGCCCAACC GGCCCAACC		GTTAAAAGC GTTAAAAGC		rcrcgrgaa rcrcgrgaa	AACCCTCAG	TATGAACGT
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ò	0	CAGTIACTGAIACCACCTTCCGCGAIGCACACCCAGTCTTIGCTIGCGACCCCGAGTCCGC 18
අු	1801	GCAGTTACTGATACCCACTTCCGCGATGCACACACACTTTGCTTGC
λo	1861	CATTCGCACTGAAGCCTGCAGAGGCCGTCGCAAAGCTGACTCCTGAGCTTTTGT
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                                                                               The present invention relates to novel pyruvate carboxylase proteins and polynucleotides encoding such proteins. Sequences of the invention are important anaplerotic enzymes for replenishing oxaloacetate consumed for biosynthesis during growth, or lysine and glutamic acid production in industrial fermentation. The present sequence is C. glutamicum pyruvate carboxylase DNA
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                      and
       Novel pyruvate carboxylase polypeptide, useful for replenishing oxaloacetate consumed for biosynthesis during growth, or lysine glutamic acid production in industrial fermentation.
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Best Local Similarity 100.0%; Pred. No. 0;
Matches 3621; Conservative 0; Mismatches
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                                              CAGGCGCACCTCGACGCTGATGATTCCAAGGAACGTCGCAATAGCCTCAACGGCCTGCTG
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biosynthesis; growth; lysine production; glutamic acid production;
industrial fermentation; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA encoding Corynebacterium glutamicum pyruvate carboxylase
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	GCTCCTATCGATAAGCTGCCTAACATCAAGGATCTGCCACTGCCACGCGGTTCC CGCCTGAAGCCAGCCCAGC	CGCCTGAAGCAGCTTGGCCCAGCGCGTTTGCTCGTGATCTCCGTGAGCAGGACGACTG 1 GCAGTTACTGATACCACCTTCCGCGATGCACACAGCTCTTTGCTTGC	1801 GEAGLIALIGAIRACCALCIICCGCGAIGCACAGICTIIGCIIGCGAGCCCGGGICCGC 1880 1861 TCATTCGCACTGCAAGCCTGCGCAGAGGCCGTCGCAAAGCTGACTCCTGAGCTTTTGTCC 1920 1861 TCATTCGCACTGAAGCCTGCGCAGAGAGCTGCCAAAGCTGACTCCTGAGCTTTTTGTCC 1920	GTGGAGGCCTGGGGGCGCCCACCATGCGTGCGTTTCCTCTTTTGAGGATCCG	TGGAACAGGTCGACGAGGTGGCGAGGGATGTCGAATGTAAACATTCAGATGCTGTTTTTTTT	CCGGGCCGCAACACCGTGGGATACACCCCGTACCCCAGACTCGTCTGCGCGCGC	AAGAAGCTGCCAGCTCCGGCGTGGACATCTTCGCATCTTCGAGGGGTTAACGACGTC	TCCCAGATGCGTCCAGCAATCGACGCAGTCCTGGAGACCAACACCGCGTAGCCGAGGGGTG	GCTATGGCTTATTCTGGTGATCTCTCTGATCGAAATGAAAAGGCTCTACACCCTGGATTAC	TACCTAAAGATGGCAGAGGGGATCGTCAAGTCTGGCGCTCACATCTTGGCCATTAAGGAT	AIGGCIGGICTGCTTCGCCCAGCIGCGGTAACCAAGCTGGTCACGCACTGCGCCGTGAA	TTCGATCTGCCAGTGCACGCCACCCACCACACTGCGGGTGGCCAGCTGGCAACCTAC	TTTGCTGCAGCTCAAGCTGGTGCAGATGCTGTTGACGGTGCTTCCGCACCACTGTCTGGC	GCGAT 2	2581 ACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGCCGTACTGGGAAGCAGTGCGCGGA 2640 2581 ACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGCCGTACTGGGAAGCAGTGCGGGA 2640	2641 CIGIACCIGCCAITIGAGICTGGAACCCCAGGCCCAACCGGTCGCGTCTACCGCCACGAA 2700 	2701 ATCCCAGGCGGACAGTTGTCCAACCTGCGTGCACAGGCCACCGCACTGGGCCTTGCGGAT 2760 2701 ATCCCAGGCGACAGTTGTCCAACCTGCGTGCACACGGCCACCGCACTGGGCCTTGCGGAT 2760 2761 GGTTTCGAACTCATCGAAGACTACGCGGTTAATGAGATGCTGGGACGCCCAACC 2820

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                                                                                                                                                                                                                                                                                                                                                                                      The present invention provides a number of nucleotide and protein sequences from the Coryneform bacterium Corynebacterium glutamicum. These are useful for identifying the mutation point of a gene derived from a mutant of coryneform bacterium, measuring expression amount and analysing the expression profile or expression pattern of a gene derived from Coryneform bacterium, and identifying a homologue of a gene derived from coryneform bacterium. Coryneform bacterium and analysing a monologue of a gene derived from coryneform bacterium, vitamins, saccharides and organic acids, nucleact acids, vitamins, saccharides and organic acids particularly L-lysine. The present sequence is a nucleic acid described in the exemplification of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from the Buropean Patent Office
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Senoh A, Ikeda M, Ozaki A;
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Matches 3621, Conservative
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Tateishi N,
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Qy 2641 CTGTACCTGCCATTTGAGTCTGGAACCCCAGGCCCAACCGGTCGCGTTACCGCCACGAA 2700 Db 107653 CTGTACCTGCCATTTGAGTCTGGAACCCCAGGCCCAACCGGTCGCGTCTACCGCCACGAA 107712	OY 2701 ATCCCAGGGGACAGTTGTCCAACCTGGGTGCACGGCACTGGGCCACTGGGGCTTTGCGGAT 2760	Oy 2761 CGTTTCGAACTCATCGAACAACTACGCAGCTTAATGAGATGCTGGGACGCCCAACC 2820		Oy 2881 GTGGATCCAGCAGACTTTGCTGCCGATCCACAAAGTACGACATCCCAGACTTGTGTC 2940 107893 GTGGATCCAGCAGACTTTGCTGCCGATCCACAAAGTACGACATCCCAGACTTTGTTGCTGCCGATCCACAAAAGTACGACACACCGAGACTTTGTTGCTGCCGATCCACAAAAGTACGACATCCCCAGACTTTTGTTGCTGCCGATCCACAAAAGTACGACACACCAGACTTTTGTTCTTGTTGCTATCTTGTTGTTCTTGTTGTTCTTGTTGTTGTTGTTGTTGTT	2941	3001	OY 3061 CAGGGGACTCGACGCTGATGATTCCAAGGAACGTCGCAAACGCTCAACCGCTGCTG 3120	3121 TTCCCGAAGCCAACGAAGATTCCTCGAGCACCGCCGCCGCCGCACACCTCTGCG 108133 TTCCCGAAGCCAACCGAAGAGTTCCTCGAGCCACCGCTTCGGCAACCAAC		Qy 3241 CCAGANGTGCGCACCCCACTGCTTGTTCGCCTGGATGCGATCTCTGAGCCAGACGATAAG 3300 Db 108253 CCAGANGTGCGCACCCCACTGCTTGTTCGCCTGGATCTCTGAGCCAGACGATAAG 108312		Qy 3361 CGCTCCGTTGAGTCTGTCACCGCAACCGCAAAAGGCAGATTCCTCCAACAAGGGCCAT 3420 Db 108373 CGCTCCGTTGAGTCTGTCACCGCAACAGAAAAGGCAGATTCCTCCAACAAGGCCAT 108432	3421 GITGCTGCACCATTCGCTGGTGTTGTCACCGTGACTGTTGCTGAAGGTGATGAGGTCAAG	OY 3481 GCTGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACAATCACTGCTTCT 3540	OY 3541 GITGACGGCAAAATCGATGCGTTGTGCTTCCTGCTGCAACGAAGGTGGAAGGTGGCGAC 3600 DD 108553 GITGACGGCAAAATCGATCGCGTTGTGCTTGCTGCTACGAAGGTGGAAAGTGGCGAC 108612	Qy 3601 TTGATCGTCGTTTCCTAA 3621 	RESULT 6 AAX24102 ID AAX24102 standard; DNA; 3728 BP. XX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This invention describes the isolation of a pyruvate carboxylase from corynebacterium glutamicum which is used in a novel method for production of lysine, threonine, homoserine, glutamate and/or arginine, variously useful as feed additives, condiments, pharmaceuticals and intermediates for fine chemicals. Increasing pyruvate carboxylase activity increases for fine of minon or famino acids of the asparate and/or glutamate families, e.g. about 50% more lysine, 40% more threonine and 150% more homoserine are secreted into the culture medium
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Increasing microbial production of specific amino acids by increasing activity or expression of pyruvate carboxylase.
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                                                                                                                                                                 Pyruvate carboxylase; amino acid production; lysine production;
threonine production; homoserine production; glutamate production,
arginine production; feed additive; condiment; pharmaceutical;
fine chemical; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.0%; Pred. No. 0;
Matches 3577; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3728 BP; 813 A; 1059 C; 1035 G; 821 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
/product= "pyruvate carboxylase"
                                                                                                                genomic DNA
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                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                             C. glutamicum pyruvate carboxylase
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07-APR-2000; 2000JP-00159162.
03-AUG-2000; 2000JP-00280988.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to a new mutated, feedback-resistant pyruvate carboxylase enzyme. The invention is useful for producing an annino acid (e.g. L-Lys, L-Thr, L-Met, L-Ile, L-Glu, L-Arg and L-Pro), by culturing a host cell in a suitable media and separating the amino acid from the medium. The vector of the invention is useful for replacement of a wild-type pyruvate carboxylase gene, with a feedback resistant pyruvate carboxylase gene with a selectable marker copy of the wild-type pyruvate carboxylase gene with a selectable marker copy of the wild-type pyruvate carboxylase gene with a selectable marker cope through homologous recombination to form a first recombinant strain, with feedback resistant pyruvate carboxylase gene through homologous recombination to form a second recombinant strain, where the homologous recombination in the above steps, occurs between the host cell and the vector. The feedback-resistant pyruvate carboxylase enzyme is resistant to feedback inhibition from appartic acid. The present nucleic acid sequence encodes the feedback-resistant pyruvate carboxylase enzyme is
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel mutated, feedback resistant pyruvate carboxylase enzyme
polypeptide, useful for producing amino acids e.g. L-lysine, L-threonine,
L-glycine, L-glutamic acid, L-proline and L-methionine and L-isoleucine.
                                                                                                                                                                                                                                                      carboxylase gene
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Pred. No. 0;
0; Mismatches 47; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3474 BP; 749 A; 1013 C; 950 G; 762 T; 0 U; 0 Other;
                                                                                                            Corynebacterium glutamicum feedback-resistant pyruvate
                                                                                                                                                    Feedback-resistant; pyruvate carboxylase enzyme; gene; aspartic acid feedback inhibition resistant.
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Best Local Similarity 98.6%;
Matches 3427; Conservative C
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                                                                                                                                                                                                                 Corynebacterium glutamicum
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P-PSDB; AAU98050.
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                                                                                                                                         365 IGGTGGCCAACCGAGGTGAAATCGCGGTGCGAGCATTCCGCGCCCGACGAGAGACCGGG
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                                                                                                                                                                                                                                              Corynebacterium; thermophilic; amino acid biosynthesis; enzyme;
thermotolerant; aceA; accBC; dtsR1; dtsR2; pfk; scrB; gluABCD; pdhA; pc;
ppc; acn; icd; lpd; odhA; ds.
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Nakamatsu T
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 GITCCTGCTGCAACGAAGGTGGAAGGTGGCGACTTGATCGTCGTCGTTTCCTAA 3621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proteins and their DNA useful for microbial production of L-amino
                     GITCCTGCTGCAACGAAGGTGGCAACTTGATCGTCGTCGTTTCCTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 63.0%; Score 2279.6; DB 5; Length 4013; Best Local Similarity 77.7%; Pred. No. 0; Maches 2808; Conservative 0; Mismatches 799; Indels 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 4013 BP; 735 A; 1376 C; 1234 G; 668 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N, Nakamura
Kurahashi O,
                                                                                                                                                                                                              Corynebacterium thermoaminogenes pc nucleotide sequence
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Kawahara Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 34; Page 126-132; 215pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                  /*tag= a
/product= "pc protein"
                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers 319. .3738
                                                                                                                                                                                                                                                                                                               Corynebacterium thermoaminogenes
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Matsui K,
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01-NOV-1999; 99JP-00311147.
21-APR-2000; 2000JP-00120687.
                                                                                                                standard; DNA; 4013
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                                                                                                                                                                                (first entry)
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E, Osumi T, 1
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P-PSDB; AAB83180.
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(1) a vector comprising a promoter operably linked to the nucleic acid nucleic acid, (2) a host cell containing the vector; (3) an isolated polypeptide or its fragment whose expression is inhibited by the antisense nucleic acid, (4) an antibody capable of specifically binding the polypeptide (5) producing the polypeptide; (6) inhibiting cellular proliferation or the activity of a gene in an operon required for proliferation, (7) identifying a gene in an operon required for the gene product or that has an activity against a biological pathway the gene product proliferation, or that inhibites cellular proliferation; (8) identifying a gene required for cellular proliferation; (8) identifying a gene required for cellular proliferation; (8) identifying a gene required for cellular proliferation or the biological pathway in which a proliferation-required gene or its gene product lies
                                                                           3661
                          3601
                                                                                                      ACCCCAAAATCCATCCCTTCTGCTTCCTGCTGCAACCAAGGTGCAAGGTGGCGACTTGA 3604
                                                                                                                    New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zyskind JW;
Xu HH;
                   3542 CCGCACCATTCCCCGGTGTGGTCACCGTGACCGTCGCCGAGGGTGATGAGATCAAGGCTG
 CTGCACCATTCGCTGGTGTTGTCACCGTGACTGTTGCTGAAGGTGAGGTCAAGGCTG
                                                                             3602 GCGACGCCGTGGCCATCATTGAGGCCATGAAGATGGAGGCCACCATCACGCGCGCCTGTCG
                                                   GAGATGCAGTCGCAATCGAGGCTATGAAGATGGAAGCAACAATCACTGCTTCTGTTG
                                                                                                                                                                                                                                                                                                                                                        Antisense; ds; prokaryotic essential gene; cell proliferation;
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Yamamoto R,
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                                                                                                                                                                                                                                                                                                                                 Prokaryotic essential gene #11488
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Carr GJ,
                                                                                                                                                       TCGTCGTCGTTTCCTA 3620
                                                                                                                                                                       TCGTGGTCGTGTCCTA 3737
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06-SEP-2001; 2001US-00948993.
25-OCT-2001; 2001US-0342923P.
08-FEB-2002; 2002US-0362851P.
06-WAR-2002; 2002US-0362699P.
                                                                                                                                                                                                                                                   ACA29831 standard; DNA; 3423
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                                                                                                                                                                                                                                                                                                                                                                                                Corynebacterium diphtheriae
                                                                                                                                                                                                                                                                                                       19-JUN-2003 (first entry)
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Trawick JD,
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P-PSDB; ABU25961.
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or a gene on which the test compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound's activity; (11) a culture comprising strains in which the gene product is overexpressed or underexpressed; (12) determining the extent to which each of the strains is present in a culture or collection of twich each of the strains is present in a culture or collection of proliferation of an organism. The antisense nucleic acids are useful for identifying proteins or screening for homologous nucleic acids required for callular proliferation to isolate candidate molecules for rational discovery programs, or for screening homologous nucleic acids required for proliferation in cells other than S. aureus, S. typhimurium, X. pneumoniae or P. aeruginosa. The present sequence is one of the target provising sesential genes. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in the printed poctation of the printed pocta
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Best Local Similarity 73.4%; Pred. No. 0;
Matches 2494; Conservative 0; Mismatches 896; Indels 9;
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                                                                                                                                                                                                                                                                                                                                                3.5.8 GACAATCGAGGAAGGCGCTACCGTCAAAGCCGGCGATCCAGTTGCTGTCATTGAGGCAAT 3317
                                                                                                                                                                                                                                                                                                                                                                             3318 gaaganggaadgaactaattagcaactacagagaactatgacgaagagaattagacaatagaacaata
CCGTCGCCGCTTCGGCAACCTCTGCGCTGGATGATCGTGAATTCTTCTACGGCCTGGT 3212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Corynebacterium glutamicum SMP protein nucleotide sequence SEQ ID NO:119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Corynebacterium glutamicum; carbon metabolism and energy production; SMP protein; sugar metabolism and oxidative phosphorylation protein; fine chemical production; organic acid; proteinogenic amino acid; nonproteinogenic amino acid; purine base; pyrimidine base; nucleoside; nucleoside; nucleotide; lipid; saturated fatty acid; unsaturated fatty acid; diol; carbohydrate; aromatic compound; vitamin; cofactor; polyketide; enzyme; diagnosis; Corynebacterium diphtheriae; evolutionary study; ds.
                                                                                                                        GGATGCGATCTCTGAGCCAGACGATAAGGGTATGCGCAATGTTGTGGCCAACGTCAACGG
                                                                                                                                                                                                          3138 CCAGATTCGCCCCATCCTCGTGGGTGATCGCAGCGTAGAGTCAGTGACAGTCACCGCCTCGGTGAA
                            cceccercaerrreecearaccaeaaacreecreaceaaarrecreraraeceraa
                                                                                           3018 AGAAGGCAAAGAAACGGTCATTCGTACCGCAGACAGTAGCGTCCCAATGCTGGTGCGTCT
                                                                                                                                                                                                                                                     3393 AAAGGCAGATTCCTCCAACAAGGGCCATGTTGCTGCACCATTCGCTGGTGTTGTCACCGT
                                                           3213 CGAAGGCCGCGAGACTTTGATCCGCCTGCCAGATGTGCGCACCCCACTGCTTGTTCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                              3573 TGCTGCAACGAAGGTGGAAGGTGGCGACTTGATCGTCGT 3611
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99DB-01031413.
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AAF71360 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in AAB79243 cory AAB 79633 which are involved in carbon metabolism and energy to AAB 79633 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors [II] for expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteinogenic or nonproteinogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside, a nucleotide, a lipid, a saturated or unsaturated fatty acid, a diol, a carbohydrate, an aromatic compound, a vitamin, a cofactor, a polyketide, or an enzyme fre presence of [I] or SMP proteins [II]) encoded by them are used for diagnosing the presence or activity of corynebacterium diphtheriae in a subject. (I), (II), (III) or host cells containing them are used to map genomes of organisms related to C. glutamicum, identify and localise C. glutamicum sequences of interest, in functionary studies, in determining SMP protein regions required for metabolism of sugars, and in modulating high-energy molecule production in a cell (i.e. ATP, NADPH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      288 AGCACTCGAAACCGGTGCAGCCACGGTAGCTATTTACCCCCGTGAAGATCGGGGGATCATT
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                                                                                                                                                                                                                                                                                                                                                                                           New isolated Corynebacterium glutamicum nucleic acid encoding a sugar metabolism and oxidative phosphorylation protein for production or modulation of production of fine chemicals e.g. amino acids, carbohydrates or enzymes.
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                                                                                                                                                                                                                                                                                                                Haberhauer G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1708; DB 4; Length 1719;
Pred. No. 0;
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99DE-01042088.
99DE-01042095.
99DE-01042123.
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990E-01033005-
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Best Local Similarity 99.9
Matches 1719; Conservative
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P-PSDB; AAB79302.
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14-JUL-1999;
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                                           GGACGCGTATGCGTTTTGTTGCTTCACCTGATGAGCTTCGCAAATTAGCAACAGAAGCA
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                                                                                                                                                                                                                                                                                                                                                                                     MAF71360 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and exidative phosphorylation (SMP) proteins given in AAB79243 to AAB 79633 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors [II] for expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteinospenic or nonproteinogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside, a nucleotide, a lipid, a saturated or unsaturated fatty acid, a diol, a carbobydrate, an aromatic compound, a vitamin, a coffactor, a polyketide, or an enzyme. The presence of [I] or SMP proteins [III] encoded by them are used for diagnosing the presence or activity of corynabacterium diphtheriae in a subject. [I], (II), (III) or host cells corntaining them are used to map genomes of organisms related to C. glutamicum, identify and localise C. glutamicum sequences of interest, in evolutionary studies, in determining SMP protein regions required for function, in modulating SMP protein activity, in modulating the metabolism of sugars, and in modulating high-energy molecule production in a cell (i.e. ATP, NADPH)
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                                                                                                                                                                                                                                                                                New isolated Corynebacterium glutamicum nucleic acid encoding a metabolism and oxidative phosphorylation protein for production modulation of production of fine chemicals e.g. amino acids, carbohydrates or enzymes.
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                                                                                                                                                                                                     Pompejus M, Kroeger B, Schroeder H, Zelder O, Haberhauer
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                                                                                                                                                                                                                                                                                                                                                            Claim 3; Page 321-323; 1246pp; English.
99DB-01040765.
99UB-0151572P.
99DB-01042076.
99DB-01042079.
99DB-01042087.
99DB-01042087.
99DB-01042123.
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P-PSDB; AAB79303.
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The invention relates to an isolated mucleic acid comprising any one of the 6213 antisense sequences given in the specification where expression of the mucleic acid inhibites proliferation of a cell. Also included are:

(1) a vector comprising a promoter operably linked to the mucleic acid encoding a polypeptide whose expression is inhibited by the antisense mucleic acid; (2) a host cell containing the vector; (3) an isolated polypeptide or its fragment whose expression is inhibited by the antisense mucleic acid; (4) an antibody capable of specifically binding the polypeptide; (5) producing the polypeptide; (6) inhibiting callular colliferation or the activity of a gene in an operon required for proliferation or the activity of a gene in an operon required for proliferation, or that has an activity against a biological pathway required for proliferation, or that inhibits cellular proliferation; (8) identifying a gene required for cellular proliferation or the biological pathway in which a proliferation-required gene or its gene product lies or a gene on which the test compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound's activity; (11) a culture comprising strains in which the gene or which each of the strains is present in a culture or collection of cultured for proliferation of an organism. The antisense mucleic acids are useful for the printed for proliferation in cells other candidate molecules for rational collection and discovery programs, or for servening homologous nucleic acids are useful for required for proliferation in cells other than S. aureus, S. typhimurium, centured for proliferation in cells other than S. aureus, S. typhimurium, conterning part of the printed specification, but was obtained in cellectronic format directly from WIPO at the sequences

C the collular proliferation in cells other than S. aureus, S. typhimurium, S. not form part of the printed Screening to but was obtained in the content of the printed Screening A. Sc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs.
                                                                                                                                                               Antisense; ds; prokaryotic essential gene; cell proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14; SEQ ID NO 25766; 1766pp; English.
                                                                                                                          Prokaryotic essential gene #19553
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Carr GJ,
ACA37896 standard; DNA; 3381 BP
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06-SEP-2001; 2001US-00948993.
25-OCT-2001; 2001US-0342923P.
08-FEE-2002; 2002US-00372851.
06-MAR-2002; 2002US-0362699P.
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Trawick JD,
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Zyskind JW; Xu HH;

Haselbeck R, Ohlsen KL, Yamamoto R, Forsyth RA,

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ACCAGAGAACCCGCCAACGGTTTCCGCCCGGACACCGGCCGCATCACCGCCTACCGCACCCCCAGGCGGCACCGCCACGCCGCACCCGCCACCGCCACCGCCACCCGCCACCGCCACCGCCACCCCAGGCGCGCAAATCACCGCAACCGCCACCCAC	dū	2398 (
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CCAGGCCGAGCTGGCGTCGTGTGGTGCAGCAGCTGCTGGTGGGTG	à	
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CACHTHGACTCCATGCTGGAGAAATGACCTGCCGTGGTTCCGACTTTGAAACTGCTGTT	ò	2458
	qq	2230
CACITICGATITICATIGUIGATICAAGGTGAACGGGGAGACGGGAATTOCCCCAGGGGG	ò	2518
	qq	2290
CONTRACT	δ	2578
TTCTTGCGTGCGTTGCTGCGGGGGAAGAGGACACTTCAAGCGCATCGCCACTGCGATTC	Dp.	2350
TTCCTGCAAGCGGTTCTGGACCCGGATTTTCAGGCTGGGCGCATCACCACCACCATCACCATCACCATCACCATCACCATCACATCAT	δλ	2638
1558 ATTGCCGATCACCGCACCTCCTTCAGGCTCCACCTGCTGATGATGAGCAGGGAGGCATC 161/ 1330 AFGASACAGGCGCACCTCAGGCGCAGAGGCGAGGAGGCGAGGAGGCGAGGAGGAGGA	qq	2410
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1618 CTGGATTACTTGGCAGATGTCACCGTGAACAAGCCTCATGGTGTGGGCCCCAAAGGATGTT 16//	QQ	2470
CTCAACTACCTGACGTGACCGTGACCGTCAAGCCGCACGCGACGCGCCCGTCGGCGGGGG	à	2758
GCAGCICCTAICGAIAAGCIGCCIAACAICAAGGAICIGCCACIGCCACIGCGGGGIICCGG	qq	2530
TACCCGCATGACAAGCTGCCCGACATCGACGGGCGAGCCGGCCG	ò	2818
1738 GACCECCTEANGCAGCTTGGCCCAGCTTGCTCGTGATCTCCGTGAGCAGGAGCAGCACA 1797	q	2590
CAGCGGTTGACCGAAGCGAGCGATTCGCGGGCCTGGCTGG	δ	2878
1798 CTGGCAGTTACTGATACCACCTTCCGCGATGCACCAGTCTTTGCTTGC	QQ Q	2650
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The invention relates to an isolated nucleic acid comprising any one of the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibite proliferation of a cell. Also included are:

(1) a vector comprising a promoter operably linked to the nucleic acid encoding a polypeptide whose expression is inhibited by the antisense nucleic acid, (2) a host cell containing the vector; (3) an isolated polypeptide or its fragment whose expression is inhibited by the antisense nucleic acid, (4) an antibody capable of specifically binding the polypeptide (5) producing the polypeptide; (6) inhibiting cellular proliferation or the activity of a gene in an operon required for proliferation; (7) identifying a compound that influences the activity of the gene product or that has an activity against a biological pathway the gene product or that has an activity against a biological pathway is dentifying a gene required for cellular proliferation; (8) identifying a gene product or that has an activity against a biological pathway in which a proliferation—required gene or its gene product lies
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                                    3241 GAGGCCGGCCAGACCATCGCGACGATCGAGGCGATGAAGATGGAAGCCGCGGTCACCAGC 3300
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Xu HH;
CATGITGCTGCACCAITCGCTGGTGTTGTCACCGTGACTGTTGCTGAAGGTGATGAGGTC
                                                                         AAGGCTGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACAATCACTGCT
                                                                                                                                              3538 TCTGTTGACGGCAAAATCGATCGCGTTGTGGTTCCTGCTGCAACGAAGGTGGAAGGTGGC
                                                                                                                                                                             3301 cceaagtcgggdaagcggggaarcgccgrgrcgggacggacggacgarchagrcgagggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense nucleic acids, useful for identifying proteins or scre
for homologous nucleic acids required for cellular proliferation to
isolate candidate molecules for rational drug discovery programs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ds; prokaryotic essential gene; cell proliferation;
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Yamamoto R,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prokaryotic essential gene #22413
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Carr GJ,
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06-SEP-2001; 2001US-0094893.
25-OCT-2001; 2001US-0342923P.
08-FEB-2002; 2002US-00372851.
06-MAR-2002; 2002US-0362699P.
                                                                                                                                                                                                                                                                                                                                           ACA40756 standard; DNA; 3384
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Trawick JD,
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P-PSDB; ABU36886.
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drug design; gene
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or a gene on which the test compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound's activity; (11) a culture comprising strains in which the gene product is overexpressed; (12) determining the extent product is overexpressed; (12) determining the extent or collection of the strains is present in a culture or collection of strains; or (13) identifying the target of a compound that inhibits the proliferation of an organism. The antisense nucleic acids required for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs, or for screening homologous nucleic acids required for proliferation in cells other than S. aureus, S. typhimurium, K. pneumoniae or P. aeruginosa. The present sequence is one of the target or corm part of the princed specification, but was obtained in electronic format directly from WIPO at the properties of the princed appecification, but was obtained in electronic format directly from WIPO at GCACAGCATTTGGATCCAGAACTGCGTGATCGCATTTGTGCGGATGCAGTAAAGTTCTGC 1017 249 129 189 477 537 717 549 837 609 897 699 357 417 250 degrirrerariceakakarececareregerecegearidedegegegegegekerrekeerine 309 597 369 657 429 430 cieciercearracacacacadaraccairraccariaircarcaaadacadridecadades 777 957 cicrarcaccircacrecacreredededecenceredadadesicarcaccacedededecence 69 ATTAACCCTCAGCATATTGAAGTGCAGATCCTTGGCGATCACACTGGAGAAGTTGTACAC 130 AAGGCGGACGAGTCTTACCAGATCGGCGACATCGGTCACCCGGGGGATGCATACCTGTCG 70 crosocorconalectrosocorritarecoracoacococarricocaciónere 418 ATCGATGAAATTATCGGTGCAGCTAAAAAGTTAAAGCAGATGCCATTTACCCGGGATAC 478 GGCTTCCTGTCTGAAATGCCCCAGCTTGCCCGCGAGTGTGCGGAAAACGGCATTACTTTT 310 GICGGICCCAGCGCCGAAGIGCTICAGCTGGGAAAAAATCTCGCGCCATCGCGGCG 598 GCGAAGAAGGCTGGTCTGCCAGTTTTGGCGGAATCCACCCGAAGAAAAAAATCGATGAG 370 ecceceándo de contración d 718 GGCGGACGCGGTATGCGTTTTGTTGCTTCACCTGATGAGCTTCGCAAATTAGCAACAGAA 490 decedenceserrandes reneiros con anteces está recesados estas estas estas estas estas estas estas estas esta 778 GCATCTCGTGAAGCTGAAGCGGCTTTCGGCGATGGCGCGGTATATGTCGAACGTGCTGTG 610 Archarccaceccacarccaesrecaearrcrescesacaacrosseseseserear 238 AAGAICTIGGIAGCAAACCGCGGCGAAAICGCGGTCCGTGCTTTCCGTGCAGCACTCGAA 10 AAGGIGCICGICGCCAATCGCGGGGAGATCGCGATCCGGGCCTTTCGTGCCGCCTACGAA 298 ACCGGTGCAGCCACGGTAGCTATTTACCCCCGTGAAGATCGGGGGATCATTCCACGGCTCT 358 TITIGOTICIGAAGCIGICCGCATIGGIACCGAAGGCICACCAGICAAGGCGIACCTGGAC 538 ATTGGCCCAACCCCAGAGGTTCTTGATCTCACCGGTGATAAGTCTCGCGCGGTAACCGCC 658 ATCGTTAAAAGCGCTGAAGGCCAGACTTACCCCCATCTTTGTGAAGGCAGTTGCCGGTGGT CITIATGAACGIGACIGCICACIGCAGCGICGICACCAAAAAGTIGICGAAAITGCGCCA Gapa Query Match 35.7%; Score 1294.4; DB 7; Length 3384; Best Local Similarity 62.0%; Pred. No. 0; Marches 2099; Conservative 0; Mismatches 1276; Indels 9; Sequence 3384 BP; 574 A; 1061 C; 1148 G; 601 T; 0 U; 0 Other; 550 838 868 670 958 666666666666666666888셤 g 셤 ò 쉱 ઠ 셤 ò ò 셤 à 셤 8 ద 8 8 8 d d à 8 셤 ઠે 8 9 ò

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3178 GCGCTGGATGATCTTCTACGGCCTGGTCGAAGGCCGCGAGACTTTGATCCGC 32 2944 CAATTGTCGGCCAACCAGTTCTTCTACGGCCTGGTCGAGGGAAGAGCTTTGATCCGC 30 3238 CTGCCAAACGTCGCACCCCATGGTTCGCCCAAGGTGAAGGCATCGGGTGAAG 30 3298 AAGGGTATGCGCACCCCATGTTCGCCTAACGCCCATTCCGAACCCGACGAA 30 3298 AAGGGTATGCGCAATGTTGTCGCCAACGGCTGGAGGCCATTCCGAACCCGACGAA 30 3298 AAGGGTATGCGCAATGTTGTCGCCAACGGCTGGAGGCCATTCCGAACCCGACGAA 30 3298 AAGGGTATGCGCAATGTTGTCGCCAACGGCCGAATCCGCCCAATGCGTGCG	3241 GGCGCCGGCCAAACCATCGCCACCATCGAGGCGATGAAGATGGAAGCCC 3538 TCTGTTGACGCGAAAATCGATCGTTGTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCAGGG 3598 GACTTGATCGTCGTTTCCTAA 3621	WP AA199682_08 800001 100000 WP AA199682_09 1000001 1100000 WP AA199682_10 1000001 1100000 WP AA199682_11 1100001 1310000 WP AA199682_12 1200001 1310000 WP AA199682_13 1300001 1410000 WP AA199682_14 1400001 1610000 WP AA199682_16 1600001 1700000 WP AA199682_16 1600001 1700000 WP AA199682_10 1700001 1910000 WP AA199682_2 10 1000001 2110000 WP AA199682_2 2 2200001 2110000 WP AA199682_2 2 2200001 2110000 WP AA199682_2 2 2200001 2310000 WP AA199682_2 2 2200001 2310000 WP AA199682_2 3 2300001 2410000 WP AA199682_2 3 3300001 2310000 WP AA199682_3 3 300001 3110000 WP AA199682_3 3 3200001 3310000

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	1258 ACGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACTATCACCGGGTACCGCTCA 1317	: 엽	
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	GCCGGCGGTGCCGGCTGGACGCAGCACCAACCTGGGCGCAAATCAGCCG	ò	2458 TACTIT
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	GITAAGGAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCATCGACGCGCTTAACGAC 2157	ð f	3178 GCGCTC
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Search completed: March 23, 2004, 18:35:43 Job time : 1318 secs us-10-045-072-1.rni

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| Sequence 1, Application US/09220081
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| Patent No. 6171833
| GENERAL INPORMATION:
| APPLICANT: Sinsky, Anthony J.
| APPLICANT: Lessard, Philip A.
| APPLICANT: Stephanopoulos, Gregory
| TITLE OF INVENTION: PYLUATE Carboxylase from Corynebacterium glutamicum
| TITLE OF INVENTION: PYLUATE Carboxylase from Corynebacterium glutamicum
| TITLE OF INVENTION: PYLUATE (BAS) 0790000
| TITLE REFERRACE: 1533 0790000
| CURRENT APPLICATION NUMBER: US/09/220,081
| CURRENT FILING DATE: 1998-12-23
| NUMBER OF SEQ ID NOS: 36
| SEQ ID NO ! SEQ ID NOT: 2.0
| SEQ ID NO !
Sequence 1, Appli
Sequence 2354, Ap
Sequence 3436, Appl
Sequence 1, Appli
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Sequence 9572, Ap
Sequence 9720, Appli
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Sequence 1, Application US/09677575
Patent No. 640351
Patent No. 640351
RESULT SINSKey, Anthony J.
APPLICANT: Lessard, Philip A.
APPLICANT: Lessard, Philip A.
APPLICANT: Willis, Laura B.
APPLICANT: Stephanopoulos, Gregory
TITLE OF INVENTION: Pyruvate Carboxylase from Corynebacterium glutamicum
FILER REFERENCE: 1533.0790000
CURRENT APPLICATION NUMBER: 09/0000
CURRENT PLING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 09/220,081
PRIOR APPLICATION NUMBER: 09/220,081
PRIOR PILING DATE: 1998-12-23
NUMBER OF SEQ ID NOS: 36
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Sequence 2, Application US/09103840A
Patent No. 629428
GENERAL INPORMATION:
PAPLICANT: FLEISCHMAN, Robert D.
APPLICANT: FARSER, Claire M.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CGTTTCGAACTCATCGAAGACAACTACGCAGCCGTTAATGAGATGCTGGGACGCCCAACC
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CTHER INFORMATION: CDC 1551
CTHER INFORMATION: "n" bases at various
CHER INFORMATION: represent a, t, c or
US-09-103-840A-2
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CURRENT FILING DATE: 199
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PATENTIN VET. 2
SEQ ID NO 2
LENGTH: 4403765
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Patent No. 6294328
GENERAL INFORMATION:
APPLICANT: FLEISCHMAN, Robert D.
APPLICANT: WHITE, Owen R.
APPLICANT: WHITE, Owen R.
APPLICANT: WENER, John C.
TITLE OF INVENTION: DIA SEQUENCES FOR STRAIN:
TITLE OF INVENTION: TUBERCULOSIS
FILE REPRENENT: 4366-20007,00
CURRENT APPLICATION NUMBER: US/09/103,840A
NUMBER OF SEQ ID NOS: 2
SEQ ID NO 1
SEQ ID NO 1
LENGTH: 4411529
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; ORGANISM: Mycobacterium tuberculosis
; OTHER INFORMATION: H37Rv
US-09-103-840A-1
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Pred. No. 0;
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34.5%; Score 1249.6; DB 4; Length
Best Local Similarity 62.0%; Pred. No. 0;
Matches 2097; Conservative 0; Mismatches 1274; Indels
NUMBER OF INVENTION: DIAGNOSTICS AND THERAPEUTICS

NUMBER OF SEQUENCES: 411
CORRESPONDENCE 3. 411
CORRESPONDENCE ADDRESS:
ADDRESSER: WOLF, GREENFIELD & SACKS, P.C.
STREET: 600 ATLANTIC AVENUE
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: USA
ZID: 02210
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
GURRENT APPLICATION NUMBER: US/08/311,731A
FILING DATE:
FLING DATE:

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ORIGINAL SOURCE;
ORGANISM: MYCOBACTERIUM TUBERCULOSIS
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ATTORNEY/AGENT INFORMATION:
NAME: GAIES, EDWARD R.
REGISTRATION NUMBER: 31,616
REFERENCE/DOCKET NUMBER: C0044
TELEPHONE: 617/720-350
TELEPHONE: 617/720-341
INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS:
LENGTH: 12155 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: circular
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
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CRGANISM: Enterococcus faecalis
US-09-134-000C-2302
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RESULT 6
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TITLE OF INVENTION:
TITLE OF INVENTION: WIGHER ACID AND AMINO ACID SEQUENCES RELATING TO
TITLE OF INVENTION: UNGLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
CURRENT PLING DATE: 1997-032
CURRENT PLING DATE: 1998-08-13
PRIOR APPLICATION NUMBER: US 60/055,778
PRIOR APPLICATION NUMBER: US 60/055,778
NUMBER OF SEQ ID NOS: 6812
SOFTWARE: PatentIn version 3.1
SEQ ID NO 2302
LENGTH: 3492 3537 3477 3057 4387 4444 3177 3357 4681 3417 4741 4445 TTATTTCCCAGTCCAACAAGGAATTCAATGAGCACCGGGAAGCCTACGGCGACACGTCG 4504 GCGCTGGATGATCGTGCTTCTACGGCCTGGTCGAAGGCCGCGAGACTTTGATCCGC 3237 CAATTGTCGGCCAACCAGTTCTTCTATGGTCTGCGCCAAGGTGAAGAGCATCGGGTGAAG 4564 4862 cécérriécédédeceredadédedrededrencedacaced-adadredadededea CTGCCAGATGTGCGCACCCCACTGCTTGTTCGCCTGGATGCGATCTCTGAGCCAGACGAT 3418 CATGTTGCTGCACCATTCGCTGGTGTTGTCACCGTGACTGTTGCTGAAGGTGATGAGGTC 4802 GGCGCCGAAACCATCGCCACCATCGAGGCGATGAAGATGGAAGCCCCGATCACCGCC cre---calecereseseresascrerrearcesecresascearrrccaaccearceaa 3298 AAGGGTATGCGCAATGTTGTGGCCAACGTCAACGCCAGATCCGCCCAATGCGTGTGCGT 4622 cocceccaricceaacecicarerecarcercaaceacecacerecececicecericare GACCGCTCCGTTGAGTCTGTCACCGCAACCGCAGAAAGGCCAGATTCCTCCAACAAGGGC 3478 AAGGCTGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACAATCACTGCT TCTGTTGACGGCAAAATCGATCGCGTTGTGGTTCCTGCTGCAACGAAGGTGGAAGGTGGC CTGTTCCCGAAGCCAACCGAAGAGTTCCTCGAGCACCGTTCGCCAACACCTCT 4271 chcdaninchchadadadadanadancaacadadadanadadadaaAcacaadada ACCCGCGCACTGGAAGGCCGCTCCGAAGGCACCTCTCTGACGGAAGTTCCTGAGGAA GAGCAGGCGCACCTCGACGCTGATTCCAAGGAACGTCGCAATAGCCTCAACCGCCTG GACGAGATTGCCCTATCGTCGGAGCCAAG---CGTCAGGCCACCCTGAACAGGCTG

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Query Match Best Local Similarity 49.1%; Score 509.2; DB 4; Length 3492; Best Local Similarity 49.1%; Pred. No. 1.18-134; Matches 1661; Conservative 0; Mismatches 1668; Indels 51; Gaps 10; Oy 233 TCAAAAAGATCTTGGTAGCAAACGGCGGCGAAATCGCGGGCTTTCCGTGCAGCAC 292	Db 65 TGAAAAGGTATTAGTTGCCAATGGGGAATTGCGATTCGAATTTTAGAGCTTGTA 124 Oy 293 TCGAAACGGTGCAGCCACGGTATTTACCCCCGTGAAATCGGGGATCATCAC 352	Db 125 CAGAATTAGATATCGTACAGAGATTATAGTGCAGAAGATGAGATCAGTATTCTGTTCATC 184 Qy 353 GCTCTTTGCTTCTGAAGCTGTCCGCATTGGTACGAAGGCTCACGGTCAAGGGGTACC 412 Db 185 GTTTCAAAGCAGATGAAGCGTATTTAGTTCGTAAGGGGAAAAAACCAATTGAAGCCTATT 244	413 TGGACATCGATGAAATTATCGGTGCAGCTAAAAAGTTAAAGCAGATGCCATTACCCGG 	Oy 473 GATACGGCTTCCTGTCTGAAAATGCCCAGCTTGCCCGCGAGTGTGCGGAAAACGGCATTA 532 Db 305 GTTATGGCTTTTATCAGAGAACTTACGCTTCGCCGAACGTGTGAAAAAAAA	OY 533 CITITAITGGCCCAACCCCAGAGGTTCTTGATCTCCAGGGGAAAAGTCTCGGGGGGGAA 592 Db 365 TITITGTCGGACCTAAAACACATCATTTAGATATTTTGGCGATAAAATTAAAGCGAAAG 424	OY 593 CGGCGGGAAGAAGGTCTGGCCAGTTTTGGCGGAATCCACCCCGAGCAAAACA 649 Db 425 AAGCAGCTGTAGCTTCGATTCCAGGCTCAGACGGCCAGTAGCAACGG 484	Oy 650 TCGATGAGATGGTAAAAGCGCTGAAGGCCAGACTTACCCCATCTTTGTGAAGGCAGTTG 709 Db 485 TGGAAGAGGTTGTAGCTTTTGGTGAAACACATGGCTTTCCTATCATGATTAAAGCTGCTT 544	OY 710 CCGGTGGTGGCGGAAGGTATGCTTGTTGCTTCACCTGATGAGCTTCGCAAATTAG 769 Db 545 TAGGTGGCGGCGCGCGGGATGCCCCTTGCCCACGAAGAAGCAAGGAAGG	OY 770 CAACAGAAGCATCTCGTGAAGCTGAAGCGGCTTTTCGCCGATGGCGCGGTATATGTCGAAC 829 Dh 605 ACGAAAGAGAAAAAGTGAAGCGAAAGCTTTGGTTTGATCGAGGTTTATGTTGAAA 664	830 GIGCIGIGATIACCCICAGCAIATIGGAGAGTGCAGACACCCITGGCGAICACCACGAGAAGAGAGAGAGAGAGAAGAAGAAGAAGAAGA	OY 890 TIGIRORCCTITATGAACGTGACTGCTCACGGCGTCGTCGAAAAAGTTGTCGAAA 949 Db 725 TCTTGCATTGATTGATGTGATTGTTCGAAGGCCCCACGAAAAGTGGTAGAAG 784	950 TIGGGCCAGCACATIGGATCCAGAACTGCGTGATCGCATTTGTGCGGATGCAGTAA	1010 AGTICTGCCGCTCCATTGGTTACCAGGCGCGGGAACCGTGGAATTCTTGGTCGATGAAA	1070 AGGGAACCACATCTCATCGAAATGAACCCACGTATCCAGGTTGAGCACACGTGACTGAC	1130 AAGAAGTCACCGAGGTGGACCTGGTGAAGGGCGCAGATGCGGTTGGCTGGTGCAACCT 	1190 IGAAGGAATIGGGICIGACCCAAGAIAAGAICAAGACCCACGGIGCAGCACIGC	

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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS TITLE OF INVENTION: BEIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS CURRENT APPLICATION NUMBER: US/09/134,001C CURRENT FILING DATE: 1998-08-13 PRIOR PAPLICATION NUMBER: US 60/064,964 PRIOR APPLICATION NUMBER: US 60/055,779 PRIOR APPLICATION NUMBER: US 60/055,779 PRIOR FILING DATE: 1997-08-14 NUMBER OF SEQ ID NOS: 5674
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                                            3296 igrciiddrocidilciacaadiarrgdicaaacgriddcdalaaaadaaaaaddrcagc
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llarity 48.4%; Pred. No. 3.9e-128;
Conservative 0; Mismatches 1718;
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; ORGANISM: Staphylococcus epidermidis
US-09-134-001C-591
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3366 aagriddrigdcigdchaaaddrahdagaaricdrircgigaagaaagridaarragaagargc 3307
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 5030;
COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.50 inch, 1.4Mb storage COMPUTER: HP Vectra 486/33
COMPUTER: HP Vectra 486/33
OPERATING SYSTEM: MSDOS Version 6.2
SOFTWARE ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/956,171E
FILING DATE: 20-Oct-1997
CLASSIFICATION: <UNKNOWN>
PRIOR APPLICATION NUMBER: 60/009,861
FILING DATE: January 5, 1996
APPLICATION NUMBER: 08/781,986
FILING DATE: January 3, 1997
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                               NAME: Mark J. Hyman
REGISTRATION NUMBER: 46,789
REGISTRATION NUMBER: PB248P1
TELECOMMUNICATION INFORMATION:
TELEPRONE: (240) 314-1224
TELEPRONE: (301) 309-8439
INFORMATION FOR SEQ ID NO: 324:
SEQUENCE CHARACTERISTICS:
LENGTH: 5030 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 324:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: double
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Steven C. Barash
Michael R. Fannon
TITLE OF INVENTION: Staphylococcus aureus Polynucleotides and Sequences
NUMBER OS ERQUENCES: 5256
CORRESPONDENCE: 5256
CORRESPONDENCE: 5256
TADRESSEE: Human Genome Sciences, Inc.
STREET: 9410 Key West Avenue
CITY: Rockville
STATE: Maryland
COUNTRY: USA
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                                 2907 TCCACAAAAGTACGACATCCCAGACTCTGTCATCGCGTTCCTGCGCGGCGAGCTTGGTAA 2966
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                                                                                                                         CCCTCCAGGTGGCCTGGCCAGAGCCACTGCGCACCCGCGCACTGGAAGGCCGCTCCGAAGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Charles Kunsch
Gil H. Choi
Patrick S. Dillon
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541 GTAĠCTCACGATGAAAGAGTGCAAĠAGAGGCTACGAACGTĠĊGAAAAĠCĠĀĀĠĊAAĀĀ 600
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PRIOR APPLICATION DATA:

APPLICATION NUMBER: 60/085,598
FILING DATE: 14 May 1998
APPLICATION NUMBER: 60/051571
FILING DATE: July 2, 1997
ATTORNEY/AGENT INFORMATION:
NAME: ATTINGEN ALTON:
REPERRENCE/DOCKET NUMBER: GTC-012
TELECOMMUNICATION INFORMATION:
TELEPHONE: (781)893-8277
INFORMATION FOR SEQ ID NO: 1156:
SEQUENCE CHARACTERISTICS:
LENGTH: 2922 Dage pairs
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LOCATION: (B) LŌCATION 1...2922
SEQUENCE DESCRIPTION: SEQ ID NO: 1156:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: Gircular
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Enterococcus faecium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: double
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
ENTEROCOCCUS FAECIUM FOR DIAGNOSTICS AND THERAPEUTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAGCCAACCGAAGAGTTCCTCGAGCACCGTCGCCGCTTCGGCAACACCTCTGCGCTGGA 3185
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                                                                                                                                                                            3027 CAAGGCACCTCTGACGGAAGTTCCTGAGGAAGAGCAGCGCGCACCTCGACGCTGATGATTC 3086
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                        CCCTCCAGGTGGCTGGCCAGAGCCACTGCGCACCGCGCACTGGAAGGCCGCTCCGAAGG 3026
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                                                                                              1089 ACCIGTAAAIGGTITTAATAAGATTIACAAGCGGTTATTTIAAAAGGCCAAGAAGCACT
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CORRESPONDENCE ADDRESS:
ADDRESSE: GENOWE THERAPEUTICS CORPORATION
STREET: 100 Beaver Street
CITY: Walcham
STATE: Massachusetts
COUNTRY: USA
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OPERATING SYSTEM: <UNKNOWN>
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/107,532A
FILING DATE: 30-Jun-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1156, Application US/09107532A Patent No. 6583275 GENERAL INFORMATION:
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TTER READABLE FORM:
MEDIUM TYPE: CD/ROM ISO9660
                                                                                                                                                                                                                                                                                                                                         CAAGGAACGTCGCAATAGCC-
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                                                                                            TIGIACACCITITAIGAACGIGACIGCICACIGCAGCGICGICACCAAAAAGIIGICGAAAA 949
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617 AGTACCTTGAAAATCCACGCCACGTCGAAATTCAGGTGATGGCCGATGGACAAGGTAATG
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| Sequence 5, Application US/07956700B
| Patent No. 5539092
| GENERAL INFORMATION:
| APPLICANT: Robert Haselkorn and Piotr Gornicki
| TITLE OF INVENTION: Carboxylase
| TITLE OF INVENTION: Carboxylase
| NUMBER OF SEQUENCES: 116
| CORRESPONDENCE ADDRESS:
| ADDRESSES: Anold, White & Durkee
| STREET: 321 No. 5539092th Clark Street
| CITY: Chicago | STATE: Illinois |
| COUNTRY: USA |
| CITY: USA |
| C
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CTRRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/956,700B
FILING DATE: 19921002
CLASSIFICATION: 800
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COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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MEDIUM TYPE: Floppy
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Sequence 1699, Application US/09543681A
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Patent No. 6605709
Patent No. Molecular Acrib Amino Acrib Sequences Relating to Proteus Mirabil TITLE OF INVENTION: NUCLEIC Acrib Amino Acrib Sequences Relating to Proteus Mirabil TITLE OF INVENTION: US/09/543,681A
CURRENT APPLICATION NUMBER: US/09/543,681A
CURRENT APPLICATION NUMBER: US 60/128,706
PRIOR PILING DATE: 1999-04-09
NUMBER OF SEQ ID NOS: 8344
SEQ ID NO 1699
LENGTH: 1362
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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Pred. No. 4.4e-79;
0; Mismatches 556;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 8.7%;
Best Local Similarity 55.4%;
Matches 721; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: DNA; ORGANISM: Proteus mirabilis
US-09-543-681A-1699
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Sequence 5, Application US/08476537

Patent No. 5756290

GENERAL INFORMATION:
APPLICANT: Robert Haselkorn and Piotr Gornicki
ITILE OF INVENTION: Cyanobacterial and Plant Acetyl-CoA; TITLE OF INVENTION: Carboxylase
NUMBER OF SEQUENCES: 116
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Arnold, White & Durkee
321 No. 5756290th Clark Street
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APPLICATION NUMBER: 07/956,700
FILING DATE: 10/21/92
ATTOMACH INFORMATION:
NAME: Thomas E. No. 5756290thrup
REGISTRATION NUMBER: 33,268
REFENCE/DOCKET NUMBER: ARCD:058
TELECOMMUNICATION INFORMATION:
TELEPHONE: 1-312-744-0090
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII-DOS
CURRENT APPLICATION DATA:
RILING DATE:
FILING DATE:
CLASSIFICATION: 435
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STREET: 321 No. 5
CITY: Chicago
STATE: Illinois
COUNTRY: USA
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8.6%; Score 313; DB 1; Length 1362;
Best Local Similarity 53.9%; Pred. No. 5.7e-79;
Matches 718; Conservative 0; Mismatches 600; Indels 1
           NAME: Thomas E. No. 5539092thrup
REGISTRATION NUMBER: 33,268
REFERENCE/DOCKET NUMBER: ARCD:058
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: Linear MOLECULE TYPE: Oligonucleotide
                                                                                                                                                                                                                          TELEPHONE: 1-312-744-0090
TELEFAX: 1-312-75-4489
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 132 Dass pairs
TYPE: Nucleic acid
STRANDEDNESS: Single
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ZIP: 60610
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COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC Compatible
COMPUTER: BEAP COMPATIBLE
SOFTWARE: ASCII-DOS
CURRENT APPLICATION NUMBER: US/08/485,607
PILING DATE: 07-UN-1995
CLASSIFICATION NUMBER: US/08/485,607
PILING DATE: 07-UN-1995
CLASSIFICATION NUMBER: 07/956,700
FILING DATE: 10/21/92
ATTORNEY/AGENT INFORMATION:
REFERENCE/DOCKET NUMBER: 33,268
REFERENCE/DOCKET NUMBER: 33,268
TELEPHONE: 1-312-744-0990
TELEPHONE: 1-312-744-0990
TELEPHONE: 1-312-744-0990
TELEPHONE: 1-312-755-4489
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTER-STICS:
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                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                        Length 1362
                                                                                                                                                                                                                                                                                                                            Query Match
8.6%; Score 313; DB 1; Length 13
Best Local Similarity 53.9%; Pred. No. 5.7e-79;
Matches 718; Conservative 0; Mismatches 600; Indels
                                                                                                                        TYPE: Nucleic acid
STRANDENNESS: Single
TOPELOGY: Linear
NOLECULE TYPE: Oligonucleotide
US-08-476-537-5
TELEFAX: 1-312-755-4489
INPORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1362 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          412
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GAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCAGATGCGCTTGGCTGCTGCTGCAACC 1188
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                                                                                                                                               904 GABATGAİTIACGGGACTĞGAÇTIĞATIGCGGAĞCAĞGAĞTIĞĞGATIĞCCCAAĞĞĞĞ----
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; Sequence 5, Application US/08485607
; Patent No. 5792627
; GENERAL INFORMATION:
    APPLICANT: Robert Haselkorn and Piotr Gornicki
    TITLE OF INVENTION: Cyanobacterial and Plant Acetyl-CoA
    TITLE OF INVENTION: Carboxylase
; NUMBER OF SEQUENCES: 116
; CORRESPONDENCE ADDRESS:
    ADDRESSE: Annold, White & Durkee
; CRESPONDENCE ADDRESS:
    STREET: 321 No. 5792627th Clark Street
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
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AACATTGGTTTCTTGCGTGCGTTGCTGCGGGAAGAGGACTTCAACTTCCAAGCGCATCGCC 1548
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1189 TIGAAGGAATIGGGICIGACCCAAGAIAAGAICAAGACCCACGGIGCAGCACTGCAGTGC
                                                      ---AAGCGCTGCGCTTCCGGCAAGCCGATATTCAACTGCGCGGGCCATGCGATCGAATGC
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Patent No. 5972644

APPLICANT: Robert Haselkorn and Piotr Gornicki

TITLE OF INVENTION: Cyanobacterial and Plant Acetyl-CoA

TITLE OF INVENTION: Carboxylase

NUMBER OF SEQUENCES: 116

CORRESPONDENCE ADDRESS:

ADDRESSEE: Arnold, White & Durkee

STREET: 321 NO. 5972644 5786170th Clark Street

CITY: Chicago.
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MEDIUM TYPE: Floppy Disk
COMPUTER: IEM PC COMPATIBLE
COMPUTER: ELSE PC COMPATIBLE
COMPUTER: DESTERN: PC-DOS/MS-DOS
SOFTWARE: ASCII-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,879
FILING DATE: 07-UN-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: 07/956,700
FILING APPLICATION DATA:
APPLICATION NUMBER: 07/956,700
FILING ADER: 10/2192
ATTORNEY/AGENT INFORMATION:
NAME: Thomas E. NO. 5972644 5786170thrup
REGISTRATION NUMBER: 33,268
REFERENCE/DOCKET NUMBER: 33,268
REFERENCE/DOCKET NUMBER: ARCD:058
TELECOMMUNICATION:
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TELEFAX: 1-312-755-4489
INFORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS:
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STRANDEDNESS: Single
TOPOLOGY: Linear
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STATE: Illi:
COUNTRY: US
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                                                                                                                                                                                                                                                                                            TICAAAAAGAICIIGGIAGCAAACCGCGGCGAAAICGCGGICCGIGCIIITCCGIGCAGCA 291
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                                                                                                                                                             Length 1362,
                                                                                                                                                             Score 313; DB 1; Length 13
Pred. No. 5.7e-79;
0; Mismatches 600; Indels
                                  TOPOLOGY: Linear
MOLECULE TYPE: Oligonucleotide
US-08-485-607-5
                                                                                                                                                             Query Match
Best Local Similarity 53.9%;
Matches 718; Conservative
   Single
   STRANDEDNESS:
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1249 CGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACTATCACCGCG 1308
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; Retent No. 639542
; GENERAL INFORMATION:
    APPLICANT: HASELKORN, ROBERT
    APPLICANT: GORNICKI, PIOTR
    TITLE OF INVENTION: CYANOBACTERIAL AND PLANT ACETYL-COA CARBOXYLASE
    TITLE OF INVENTION: CYANOBACTERIAL AND PLANT ACETYL-COA CARBOXYLASE
    CURRENT APPLICATION NUMBER: US/09/433,043B
    CURRENT PILING DATE: 1999-10-25
    FRIOR PILING DATE: 1995-06-07
    PRIOR PILING DATE: 1995-06-07
    PRIOR PLING DATE: 1995-06-07
    PRIOR PLING DATE: 1992-10-02
    NUMBER OF SEQ ID NOS: 128
    SOFTWARE: PATCHIN Ver. 2.1
    TEMPORT: 1.30
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                                                                                                                                                                                                                                                                                                                 TACCOCTCACCAGGCGGAGCTGGCGTTCGTCTTGACGGTGCAGCTCAGCTCGGTGGCGAA
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8.6%; Score 313; DB 4; Length 1362;
Best Local Similarity 53.9%; Pred. No. 5.7e-79;
Matches 718; Conservative 0; Mismatches 600; Indels 1
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                                                                                                                                304 ACCITIATIGECCCCAGCCCCGATICGATICGAGCCATGGGCGATAAATCCACCGCTAAG 363
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(gn2_6/ptodata/2/pubpna/US60_NEW_PUB.seq:*

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8 3945 9 US-09-911-800A-1566

7 4017 9 US-09-880-107-3029
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US-10-369-493-35714
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2438257 segs, 1849576744 residues
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GenCore version
Copyright (c) 1993 - 2004
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Listing first 45 summaries
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Sequence 1673, A
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Sequence 7, Appli
15 US-10-369-493-38693
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14 US-10-282-122A-6939
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ALIGNMENTS

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Sequence 1, Application US/10045072;
Sequence 1, Application US/10045072;
Publication No. US20030027305A1
GENERAL INFORMATION:
APPLICANT: Sinskey, Anthony J.
APPLICANT: Lessard, Philip A.
APPLICANT: Willis, Laura B.
TITLE REFERENCE: 1533.0790002
CURRENT PALING DATE: 2002-01-15
PRIOR PLING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: US 09/677,575
PRIOR PILING DATE: 1999-12-23
NUMBER OF SEQ ID NOS: 39
NUMBER OF SEQ ID NOS: 39
SOFTWARE: Patentin Ver. 2.0
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100.0%; Score 3621;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 3621; Conservative 0; Mismatches
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ORGANISM: Corynebacterium glutamicum
FRATURE:
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; LOCATION: (199)..(3621)
US-10-045-072-1
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1201 GGTCTGACCCAAGATAAGATCCAACGGTGCAGCACTGCAGTGCCGCATCACACG 1260 	1261 GAAGATCCAAACGACTTCCGCCCAGATACCGGAACTATCACCGGTACCGCTACCGCTACCA 1320 	1321 GGGGAAGCTGGCGTTCGTCTTGACGGTGCAGCTCAGCTC	1381 TTTGACTCCATGCTGGAAAATGACCTGCCGTGGTTCCGACTTTGAAACTGCTGTTGCT 1440	1441 CGTGCACAGCGCGTTGGCTGAGTTCACCGTGTCTGGTGTTGCAACCAAC	1501 TTGCGTGCGTTGCTGCGGGAAGAGCTCTCACTTCCAAGCGCATCGCCACCGGATTCATT 1560	1561 GCCGATCACCGCACCTCTTCAGGCTCCACCTGATGATGAGCAGGGACGCATCCTG 1620	1621 GATTACTTGGCAGATGTCACCGTGAACAAGCCTCATGGTGTGCGTCCAAAGGATGTTGCA 1680 	1681 GCTCCTATCGATAAGCTGCCTAACATCAAGGATCTGCCACTGCCACGGGGTTCCCGTGAC 1740	1741 CGCCTGAAGCAGCTIGGCCGAGCGGTTTGCTCGTGATCTCGGTGAGCAGGCGCACTG 1800	1801 GCAGTTACTGATACCACCTTCCGCGATGCACCCAGTCTTTGCTTGC	1861 TCATTCGCACTGAAGCCTGCGGCAGAGGCCGTCGAAGCTGACTCCTGAGCTTTTGTCC 1920	1921 GTGGAGGCCTGGGGCGCGCCCTACGATGTGGCGATGCGTTTCCTCTTTGAGGATCCG 1980	1981 IGGGACAGGCTCGACGAGCTGCGCGATGCCGAATGTAACATTCAGATGCTGCTT 2040	2041 CGCGGCCGCAACACCGTGGGATACACCCCGTACCCAGACTCCGTCTGCCGCGCGCTTTGTT 2100 [2101 AAGGAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCATCTTCGACGCGCTTAACGACGTC 2160 2101 AAGGAAGCTGCCGGCTCGGCGTGAACTTCCGCATCTTCGACGCGCTTAACGACGTC 2160	2161 TCCCAGATGCGTCCAGCAATCGACGCAGTCCTCGGAACCAACACGCGGGTAGCCGAGGTG 2220 2161 TCCCAGATGCGTCCAGCAATCGACGAGTCCTCGGAGACCAACACGCGGTAGCCGAGGTG 2220	2221 GCTATGGCTTATTCTGGTGATCTCTGGTGATGAAAAGCTCTACACCCTGGATTAC 2280 2221 GCTATGGCTTATTCTGGTGATCTCTCTGATCCAAATGAAAAGCTCTACACCCTGGATTAC 2280	
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1699 CCTAACATCAAGGATCTGCCACTGCGGGGTTCCCGTGACGGCTTGGC 1758	1939 1741 1999 1801 2059	2119 GGCGTGGACATCTTCGGCATCTTCGACGCGTTAACGACGTCCCCAGATGGGTCCGGCACGCAC	2359 CCAGCTGCGGTAACCAAGCTGGTCACCGCACTGCGGCGTGAATTCGATCTGCCAGTGCC 24 2161 CCAGCTGCGGTAACCAAGCTGGTCACCGCACTGCGGCGCGTGAATTCGATCTGCCAGTGCAC 22 2419 GTGCACACCCACGACACTGCGGGTGGCCAGCTGGCAACCTACTTTGCTGCAGCTCAAGCT 24 2221 GTGCACACCCACGACACTGCGGGTGGCCAGCTGGCAACCTACTTTGCTGCAGCTCAAGGT 24 2479 GGTGCAGACACTGCGGGTGGCCAGCTGGCAACCTACTTTGCTGCAGCTCAAGGT 25 2479 GGTGCAGATGCTGTTGACGGTGCTTCCGCACCTGCTGCACCTTTGCTGCAGCTCAAGCT 25 2539 CTGTTGCCATTGTTGCTGCATTCCGCACCCCACCTGCAGCACTCCCAGCCATCC 25 2539 CTGTTGCCATTGTTGCTGCATTCCGCACCCCCCACCGCATTACAGCTTCCAGG 25 2539 CTGTTGCCATTGTTGCTGCATTCGCGCACCCCCCAGCCACCCTCCCAGCCTTCCAGG 25 2539 CTGTTGCTGCTTTCACTGCATTCGCGCACACCCGCATACCGGTTTTGAGCCTCCAGG	2599 GCTGTTTCTGACCTCGAGCCGTACTGGGAAGCACTGCGGGGAGCTGTACCTGCCATTTGAG 2401 GCTGTTTCTGACCTCGAGCCGTACTGGGAAGCAGTGGGGGGACTGTACCTGCCATTTGAG 2401 GCTGTTTCTGACCTCGAGCCGTACTGGGAAGCAGTGGCGGAACTGTACCTGCCATTTGAG 2659 TCTGGAACCCCAGGCCCAACCGGTCGCGTTACCGCCACGAGAATCCCAGGCGGACAGTTG 2461 TCTGGAACCCCAGGCCCAACCGGTCGAGCTACCGCCACGAGAATCCCAGGCGGACAGTTG 2719 TCCAACCTGCGTGCACCGGCCACCGGCTTTACCGCCACCGGAATCGTTTCGAACTTCGAA 2521 TCCAACCTGCGTGCACCGCCACCGCACTGGGCCTTGCGGATCGTTTCGAACTCATCGAA 2521 TCCAACCTGCGTGCACAGGCCACCGCACTGGGGCCTTGCGGATCGTTTCGAACTCATCGAA 25779 GACAACTACGCAGCCACCGCCACCGCACCCCCAACCCCAACCCCCCATCCTCC
619 GTTTTGGCGGAATCCACCCGAGCAAAACATCGATGAGATCGTTAAAAGCGCTGAAGGC 678 421 GTTTTGGCGGAATCCACCCGAGCAAAACATCGATGAGATCGTTAAAAGCGCTGAAGGC 678 421 GTTTTGGCGGAATCCACCCCGAGCAAAACATCGATGGCTTTT 738 431 CACACTTACCCCATCTTTTGAAAGCAGTGCCGATGGCGTTTT 738 431 CACACTTACCCCATCTTTTGAAAGCAGTGCCGATGGCTTTT 738 432 GAACTTCACCTGATGAGCAGTTGCCGATGGCTGTTTT 540 739 GTTGCTTCACCTGATGAGCAATTAGCAACAGAAGCATCTCGTGAAGCG 798 731 GTTGCTTCACCTGATGAGCATTAGCAACAGAAGCATCTCGTGAAGCG 600 739 GTTGCTTCACCTGATGAGCATTAGCAACAGAAGCATCTCGTGAAGCG 600 739 GTTGCTTCACCTGATGAGCAACTTAGCAACAGAAGCATCTCGTGAAGCG 600 739 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATCTCGTGAAGCG 600 730 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATCTCGTGAAGCG 600 730 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATCTCGTGAAGCTGAAGCG 600 730 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATCTCGTGAAGCTGAAGCG 600 730 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATCTCGTGAAGCG 600 730 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATCTCGTGAAGCTGAAGCG 600 730 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATTAGAA 858 730 GTTGCTTCACCTGATGAGCAACTAGCAACAGAAGCATTAGAA 858 730 GTTGCTTCACCTGATGAGCAACTAGCAACTGAATTAGAA 858 730 GTTGCTTCACCTGATGAGCAACTAGCAACTGAACACTCTCGTGAAGCAACTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCAACTGAAGCAACTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCTGAAGCAAGAAGCAAGAAGCAAGAAGAAGAAGAAGAAGAAG	GCTCA 918 GCTCA 918 GCTCA 720 CAGAA 978 CCAGAA 780 CAGAA 780 AGGGC 1038	1039 GCGGGAACCGTGGAATTCTTGGTCGATGAAAGGGCAACCACGTCTTCATCGAAATGAAC	1080 1338 1140 1200 1260 1260	CTGCGG 1320 CACCTC 1578 CACCTC 1380 GATGTC 1638 GATGTC 1640 AAGCTG 1500 AAGCTG 1500

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                                                                                                                                                                                                                                                                           CGCGAGTGTGCGGAAAACGGCATTACTTTATTGGCCCAAACCCCAGAGGTTCTTGATCTC
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                                                                                                                                       148 GIGACTICITATICACCCTTICGCCGTCTCTTGTTGAAAGGAATAATTACTCTAGTGGACT
                                                                                                                                                        1 GTGACTGCTATCACCCTTGGCGGTCTCTTGTTGAAAGGAATAATTACTCTAGTGTCGACT
                                                                                                                                                                                                208 CACACATCTICAACGCTTCCAGCATTCAAAAGATCTTGGTAGCAAACCGCGGGCGAAATC
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                                                                                   DB 9; Length 3474;
                                                                                Score 3398.8; DB 9; Length
Pred. No. 0;
0; Mismatches 47; Indels
ORGANISM: Corynebacterium glutamicum
                                                                                  Query Match 93.9%;
Best Local Similarity 98.6%;
Matches 3427; Conservative (
      ; ORGANISM: Corynebacte; FEATURE: ; NAME/KEY: CDS ; LOCATION: (1)..(3474)
US-09-974-973-1
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Sequence 1, Application US/09974973

Patent No. US20020177202A1

GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: Hanke, Paul D.

TITLE OF INVENTION: Feedback-Resistant Pyruvate Carboxylase Gene from Corynebacterium

TITLE OF INVENTION: Feedback-Resistant Pyruvate Carboxylase Gene from Corynebacterium

CURRENT APPLICATION NUMBER: US/09/974,973

CURRENT APPLICATION NUMBER: US 60/239,913

PRIOR APPLICATION NUMBER: US 60/239,913

PRIOR APPLICATION NOS: 19

SOFTWARE: PatentIn version 3.0

SEQ ID NO 1

LENGTH: 3474

TYPE: DNA
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        447 AGAAGCAACAACGATCCAAAGAAGCTCGCAGAGCTGACCAAGGGGCAGACCTACCCGCT
                                                                                                                                                          TGAGCTTCGCAAATTAGCAACAGAAGCATCTCGTGAAGCTGAAGCGGCGTTTCGGCGATGG
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APPLICANT: Wall, Daniel
APPLICANT: Taradck, John
APPLICANT: Taradck, John
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APPLICANT: Garar, Grant
APPLICANT: Prosych, R.
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APPLICANT: Prosych, R.
APPLICANT: Elitano: 1034
CURRENT FILING PATE: 2003-02-20
PRIOR APPLICATION NUMBER: 60/206, 848
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PRIOR APPLICATION NUMBER: 60/207, 727
PRIOR APPLICATION NUMBER: 60/207, 727
PRIOR PILING DATE: 2000-09-06
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PRIOR APPLICATION NUMBER: 60/230, 347
PRIOR PILING DATE: 2000-10-23
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PRIOR APPLICATION NUMBER: 60/267, 636
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PRIOR PILING DATE: 2010-10-16
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PRIOR PILING DATE: 2000-120-16
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US-10-282-122A-25766
Sequence 25766, Application US/10282122A
Publication No. US20040029129A1
GENERAL INFORMATION:
APPLICANT: Wang' Lidangsu
APPLICANT: Malone, Cheryl
APPLICANT: Malone, Cheryl
APPLICANT: Wall, Daniel
APPLICANT: Zyskind, Judith
APPLICANT: Zyskind, Judith
APPLICANT: Zyskind, Judith
APPLICANT: Zyskind, Judith
APPLICANT: Zyskind, Judith
APPLICANT: Trawick, John
APPLICANT: Trawick, John
APPLICANT: Yamanoto, Robert
APPLICANT: Yamanoto, Robert
APPLICANT: Xu, H.
APPLICANT: Xu, H.
APPLICANT: Surfath, R.
APPLICANT: Gent
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Best Local Similarity 63.2%; Pred. No. 0;
Matches 2131; Conservative 0; Mismatches 1234; Indels
CURRENT FILING DATE: 2003-02-20
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR PILING DATE: 2000-03-21
PRIOR PRILING DATE: 2000-05-23
PRIOR PLING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR PLING DATE: 2000-05-26
PRIOR PLING DATE: 2000-09-06
PRIOR PLING DATE: 2000-09-06
PRIOR PLING DATE: 2000-09-06
PRIOR PLING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/245,578
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR PLING DATE: 2000-11-27
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Pred. No. 0;
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PRIOR APPLICATION NUMBER: 60/230,347
PRIOR FILING DATE: 2000-09-09
PRIOR FILING DATE: 2000-09-09
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PRIOR FILING DATE: 2000-10-23
PRIOR FILING DATE: 2000-11-27
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PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2001-02-09
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PRIOR FILING DATE: 2001-02-09
PRIOR FILING DATE: 2001-02-09
PRIOR FILING DATE: 2001-02-16
Remaining Prior Application data removed - S
NUMBER OF EG. ID NOS: 78614
SEQ ID NO 28626
LENGTHARE: PATENTIN VETSION 3.1
SEQ ID NO 28626
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ORGANISM: Mycobacterium tuberculosis
US-10-282-122A-28626
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Best Local Similarity 62.0%;
Matches 2099; Conservative
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PRIOR FILING DATE: 2001-02-09
PRIOR APPLICATION NUMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
Remaining Prior Application data removed
NUMBER OF SEQ ID NOS: 78614
SOFTWARE: Patentin version 3.1
SEQ ID NO 26500
LENGTH: 3381
                                                                                                                                                                                                                                                                                         ORGANISM: Mycobacterium bovis US-10-282-122A-26500
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Best Local Similarity 62.0%;
Matches 2095; Conservative
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Best Local Similarity 54.2%;
Matches 1521; Conservative C
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ORGANISM: Rattus norvegicus
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3298 AAGGGTATGCGCAATGTTGTGGCCAACGTCAACGGCCCAGATCCGCCCAATGCGTGTGCGT
                                                            3061 GGGGGGATGCGATGTGCATCTCAACGGGCAGCTGCGGCCGGTGCTAGTGCGC
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Pred. No. 3.2e-197;
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APPLICANT: Johnson, Kory
APPLICANT: Castle, Arthur
APPLICANT: Castle, Arthur
APPLICANT: Castle, Michael
APPLICANT: Castle, Michael
APPLICANT: Castle, Michael
APPLICANT: Gane Logic, Inc.
TITLE OF INVENTION: Molecular Toxicology Modeling
FILE REFERENCE: 44921-5038-US
CURRENT APPLICATION NUMBER: US 60/222,040
PRIOR FILING DATE: 2001-07-31
PRIOR FILING DATE: 2000-11-02
PRIOR FILING DATE: 2000-11-02
PRIOR FILING DATE: 2001-05-11
PRIOR FILING DATE: 2001-05-11
PRIOR FILING DATE: 2001-05-11
PRIOR FILING DATE: 2001-05-12
PRIOR FILING DATE: 2001-05-15
PRIOR FILING DATE: 2001-05-15
PRIOR FILING DATE: 2001-05-15
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		263 Oy 1427 A 412 Db 1344 C 323	472 Qy 1487 383 Db 1404	532 Oy 1547 443 Db 1464	592 Qy 1607 592 Db 1524 503	649 Oy 1667 649 Db 1584 563	AAGGCAGTIG 709 1721 TGCCAGGGGTTCCCGTGACCGCCTGAGCAGCTGGCCCAGCCGCGTTTGCTCATC		Db				GENERAL 1969 OY 2081 CCGTCTGCCGCGCGTTTGTTAAGAAAGTTCCGCCAGCTCGGCGTGGACATCTTCCGCATCT					ATTGAGGTTT 1223 Qy 2381 TCACCGCACTGCGCCGTGAATTGGATCTGCCAGGTGCACGACGACGACGACGACGACGACGACGACGACGACGAC
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2301 TCAGCTCCCTCCGGGACCGGTTCCCCGACCTCCCACACATCCATACCCATGACACAT 2360
                                                                                                   GTGCTTCCGCACCACTGTCTGGCACCACCTCCCAGCCATCCCTGTCTGCCATTGTTGCTG
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Sequence 3029, Application US/09880107

Sequence 3029, Application US/09880107

Sequence 3029, Application US/09880107

Sequence 3029, Application US/09880107

APPLICANT: Horne, Darci T.

APPLICANT: Gene Logic, Inc.

APPLICANT: Gene Logic, Inc.

TILE OF INVENTION: Gene Expression Profiles in Liver Cancer FILE REFRENCE: 44821-5028-WO

CURRENT PELION OFFE: 2001-06-14

PRIOR PRING APPLICATION NUMBER: US 60/211,379

PRIOR APPLICATION NUMBER: US 60/211,379

PRIOR PELING DATE: 2000-06-14

PRIOR PLING DATE: 2000-06-14

PRIOR PELING DATE: 2000-06-14

SEQ ID NOS: 3950

SOFTWARE: PatentIN Ver. 2.1

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LENGTH 4017
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; OTHER INFORMATION: Genbank Accession No. US20020142981A1 S72370
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RESULT 12

US-10-1569-493-31453

Sequence 31453, Application US/10369493

Sublication No. US20030233675A1

GENERAL INFORMATION:
APPLICANT: Cac, Youndweil
APPLICANT: Slater, Steven C.
APPLICANT: Ghidman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: BYPRESSION OF MICROBIAL PROPERIES
TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERIES
TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERIES
TITLE OF INVENTION: DIANTS WITH 1MPROVED PROPERIES
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TITLE OF INVENTION DIANTS WITH 1MPROVED PROPERIES
TITLE OF INVENTION NUMBER: US/10/369,493
CURRENT FILING DATE: 2002-02-28

PRIOR FILING DATE: 2002-02-21

NUMBER OF SEQ ID NOS: 47374

SEC ID NO 31453

LENGTH: 3432
238 AAGATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCCGTGCTTTCCGTGCAGCACTCGAA 297
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18.2%; Score 659; DB 15;
Best Local Similarity 51.8%; Pred. No. 1.6e-190;
Matches 1782; Conservative 0; Mismatches 1580;
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; ORGANISM: Rhodobacter sphaeroides
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APPLICANT: Cao, Yongwei
APPLICANT: Cao, Yongwei
APPLICANT: Hinkle, Gregory J.
APPLICANT: Stater, Steven C.
APPLICANT: Goldman, Barry C.
APPLICANT: Goldman, Barry C.
APPLICANT: Goldman, Barry C.
APPLICANT: Chen, Xianfeng
TITLE OF INVANTION: BYPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION (TITLE OF INVANTION: PLANTS WITH IMPROVED PROPERTIES
FILE REFERENCE: 38-10(52052)8
CURRENT APPLICATION NUMBER: US/10/369,493
CURRENT PILING DATE: 2003-02-28
PRIOR APPLICATION NUMBER: US 60/360,039
PRIOR FILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
SEQ ID NO 35714
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Pred. No. 8.7e-186;
0; Mismatches 1599;
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; Sequence 35714, Application US/10369493
; Publication No. US20030233675A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                            3589 GAAGGTGGCGACTTGAT 3605
                                                                                                                                                                                                                                                                                                                                                                                                          3415 GAGGCGAAGGACCTGCT 3431
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Best Local Similarity 51.6%;
Matches 1788; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: DNA
; ORGANISM: Mesorhizobium loti
US-10-369-493-35714
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                                                                                                                                                                                                                                                                                                                                  Length 3441;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                      Score 617; DB 15;
Pred. No. 1.2e-177;
0; Mismatches 1590;
; SEQ ID NO 35137

: LENGTH: 3441

: TYPE: DNA

; ORGANISM: Agrobacterium tumefaciens

US-10-369-493-35137
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Best Local Similarity 51.6°
Matches 1776; Conservative
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Publication No. US20030233675A1

GENERAL INFORMATION:
APPLICANT: Cao, Yongwei
APPLICANT: Slater, Steven C.
APPLICANT: Goldman, Barry S.
APPLICANT: Glach, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
TITLE OF LINVENTION: PLANTS WITH IMPROVED PROPERTIES
TITLE OF LINVENTION: PLANTS WITH IMPROVED PROPERTIES
CURRENT APPLICATION NUMBER: US/10/369,493
CURRENT APPLICATION NUMBER: US 60/360,039
PRIOR PILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
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APPLICANT: Goldman, Barry S.
APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF PLICE PEPERRENTS 38-10 (5202S) OP GOLDMAN APPLICATION NUMBER: US)
CURRENT APPLICATION NUMBER: US 60/360,039
PRIOR PRILING DATE: 2003-02-21
NUMBER OF SEQ ID NOS: 47374
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GCGCAGGTCAAGCGTCAGGACCGCGACCAAGCTTCTGACCTATCTGGCCGATGTGAACGGTGAAAGATGTTGCAGCTCCTATCGATAAGGTTAACAAAGATGTTGCAGCTCCTATCGATAAGGTTACAAAGCTTGCAGAAACCTAAAGGCTGCGAAAGCCTGCGAAAGCCTGCGAAAGCCTGCGAAAGCCTGCGAAAGCCTGCGAAAGCCTGCGAAAAGCCTGCGAAAAGCCTGCGAAAAGCCTGCGAAAAGCCTGCGAAAAGCCTGCGAAAAGCCTGCGAAAAGCCTGAAAAGCCTGCGAAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAGCCTGAAAAAGCCTGAAAAAAAA	ctgcctaacatcaaggatctgccactgccacgcggtrccgtgacggcctgaaggaggaggtr 	ggcccagccgcgrragcrcgrgarccsrgagcaggacgcacrggcagrracrgaracc 	ACCTICCGCGAIGCACACCAGICTITGCTIGCGACCCGAGICCGCICALICGCACTGAAG	ccracagecagaageccgracaaagergarccraagerritgreegragageccraagegeccraagegeccraagegeccraagegeccraagegeccracagagegeccracagageccracagageccracagageccracagagegeccracagagegeccracagagegeccracagagegeccracagagegeccracagagegeccracagageccagageccagageccagageccagageccagagegeccagageccagageccagageccagageccagageccagageccagageccagageccagageccagageccagageccagageccagageccaga	GGCGCGACCTACGATGTGGCGATGCGTTTCCTCTTTGAGGATCCGTGGGACAGGCTCGAC	GAGCIGCGCGAGGCGAIGCCGAAIGIAAACAITCAGAIGCIGCTIGCTIGCGGGGCGCGCAACACCCCIACCCCAAIGCAGACCTGCGAAGGIGCCGAACGCCGAACGCCAACGGCCGAACGCCAACGGCCGAACGCCAACGAACGCCAACGGCCGAACGCCAACGGCCGAACGGCCGAACGGCCGAACGGCCGAACAAC	gregatacacccgtacccagactccgrctgccgcgcgtttgttaaggaagctgccagc 	TCCGGCGTGGACATCTTCGGCATCTTCGACGCGCTTAACGACGTCTCCCAGATGCGTCCAGAGGCGTCCAGAGCGTCCAGAGCGTCCAGAGCTCAGGCGTCGAGCTGCCTGAACTGGGTGGAGAAAATGCGGGTG	GCAATCGACGCAGTCCTGGAGACCAACACGCGGGTGGCGAGGTGGCTATGGCTTATTCT 	GGTGATCTCTCTGATCCAAATGAAAAGCTCTACACCCTGGATTACTACCTAAAGATGGCA 	GAGGAGATOGTCAAGTCTGGCGCTCACATGGCCATTAAGGATATGGCTGGTCTGCTT 	COCCCAGCTGCGGTAACCAGGTCGTCACCGCACTGCGCGCGTGAATTCGATCTGCCAGTG	CACGTGCACACCCACGACACTGCGGGTGGCCAGCTGGCAACCTATTGCTGCAGCTCAA 	GCTGGTGCAGATGCTGTTGACGGTGCTTCCGCACCTGTCTGGCACCACCTCCCAGCCA 	TCCCTGTCTGCCATTGTTGCTGCATTCGCGCACACCGTGGGGATACGGTTTGAGCCTC	GAGGCTGTTTCTGACCTCGAGCCGTACTGGGAAGCAGTGGGGCGGACTGTACTTTTTTTT	GAGTCTGGAACCCCAGGCCCAACGGTCGCGTCTACCGCCACGAAATCCCCAGGCGGACAG
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TIGICCAACCIGCGIGCACAGGCCACCGCACTGGCGCATCGTTCGAACTCAIC 2775
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E101853 RH49459.5
B103175 602806142
B103175 B177875
B105332 BD177875
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BF21876 602104410
CB279877 CF16021xb
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B1621845 RH33265.5
B1605019 RH702878
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AT293107782 AGENCOURT
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Mus musculus PC gene, VIRTUAL TRANSCRIPT, partial sequence, genomic
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Whas musculus (house mouse)

Mus musculus (house mouse)

Mus musculus

Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;

Bukaryota, Metazoa, Chordata, Sciurognathi, Muridae, Murinae, Mus.

1 (bases 1 to 3537)

Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,

Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,

Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J.,

Adams, M.D. and Cargill, A.

Inferring nonneutral evolution from human-chimp-mouse orthologous
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Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Direct Submission
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AY408285 Homo sapi
AY408286 Pan trog1
AK077665 Mus muscu
                                                                                                                                                                                           March 23, 2004, 18:35:49 ; Search time 8670 Seconds (without alignments) 12471.852 Million cell updates/sec
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Copyright (c) 1993 - 2004 Compugen Ltd.
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Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive,
Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering
them based on alignment.
Location/Qualifiers
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Forriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,
Adams,M.D. and Cargill,M.
Inferring nonneutral evolution from human-chimp-mouse orthologous
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This sequence was made by sequencing genomic exons and ordering them based on alignment.
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Location/Qualifiers

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                                                                                                                                                     Score 606.2; DB 29; Length 3537;
Pred. No. 1.5e-130;
0; Mismatches 1416; Indels 24;
/gene="PC"
/locus_tag="HCM3173"
                                                                                                                                                              16.7%;
                                                                                                                                                                   Query Match 16.7
Best Local Similarity 48.7
Matches 1365; Conservative
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Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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3537 bp DNA HOMO Sapiens PC gene, VIRTUAL TRANSCRIPT, AY408285

RESULT 2 AY408285 LOCUS DEFINITION

AY408285.1 GI:39764256

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

1790	Oy 1961 GTTTCTTTTGAGG DD 1850 GCTTCTGTATGAGT	Qy 2021 TAAACATTCAGATGC Db 1910 TCCCTTTCCAGATGC	Oy 2081 CCGTCTGCCGCGCTT 	2141	Cy 2201 ACACCGCGGTAGCCG Db 2087 CCGGAGGCGTGGTGG	Oy 2261 AGCTCTACACCCTGG	2321	Db 2207 ACAICCIGIGCAICA	2267	Db 2327 CAGGGCAGGCTGG	Oy 2498 GIGCTICCGCACCAC DD 2387 IGGCAGCIGATICCA	2558	Db 2447 GTACCAGAGGACTC	2507	Oy 2678 CCGGTCGCG	2732	Db 2627 TCCAGGCCCACAGCA	2687	Db 2747 ACCTGGCACTCCACC	Qy 2912 AAAAGTACGACATCC	2972	
830 GTGCTGTGATTAACCCTCAGCATATTGAAGTGCAGATCCTTGGCGATCACTGGAGAAG 889 710 AGTTCATCGAGGAACCACGGCACATCGAGGTGCAGAATCTTGGGGGACCAGTATGGGAACA 769	890 TTGTACACCTTTATGAACGTGACTCACTGCAGCGTCGTCGTCCAAAAGTTGTCGAAA 949	TIGGGCCAGCACACACATIGGATCCAGAACTGCGTGATCGCATITGTGCGGATGCAGTAA		AGGGAACCACTCTTCATCGAAATGAACCCAGGTATCCAGGTTGAGCACACCGTGACTG	1130 AAGAAGTCACCGACGTGGACCTGGTGAAGGCGCAGATGCGCTTGGCTGCTGCTGCAACCT 1189	AGGAGAL CACCOGRAMMININININININININININININININININININI	1070 NINNYHNINNYHNINNYHNINNYHNINNYHNINNYHNINNYHNINNYHNINNYHNINNYHNINNYHNIN 1129	 	1310 ACCGCTCACCAGGGGAGCTTGGTCTTGACGGTGCAGCTCGGTGGGG 1366	1367 AAATCACCGCACACTTTGACTCCATGCTGGTGAAAATGACCTGCCGTGGTTTCCGACTTTG 1426 1250 TCATCTCGCCCACTACGACTCCTGCTGGTCATTGCCCACGCAAAGACCACC 1309		1310 CCACGGCCACCACCAAGATGAGCAGGCCCTTGCGGAGTTCCGCGTCCGAGGTGTGAAGN 1369 1487 CCAACATTGGTTTCTTGCGTGCGGGAAGAAGAACAACTTCACTTCCAAGCGCATGG 1546	1370 NINNINININININININININININININININININ		1430 NRRIKRINRIKRINRIKRINRIKRINRIKRINRIKRINRIKRINRIKRINRIKRINRIKRINRIKRINRIKRINRIKRI 1489 1607 AGGGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAACAAGCCTCATGGTGTG 1662	NNNNNNNNNNNNNNNNNNNNNNNNGCCATGTATGATGATGATAAACGGTCCAACCCCGATTC	1855 CCGTCAAGGCCCCAAGGCCCCAAGGCCCGTTGTCCCTGCCCATAGGCCCGC 1609	1721 TGCCACGCGGTTCCCGTGACGCCTGAAGCAGCTTGGCCCAGCCGCGTTTGCTCGTGATC 1780		1841 TGCTTGCGACCCGAGTCGTCATCGACCTGCGAGGGAGAGCGCGCGC		1901 TGACTCCTGAGCTTTTGTCCGTGGAGGCCTGGGCGCGCGACCTACGATGTGGCGATGC 1960
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2746 AAGAIATGGCTGGTTCGCCCAGCTGCGGTAACCAAGCTGG 2380 --costgaattogatctgccagtgcacgtgcacaccacgacactg 2437 scaeccarecrescerereccaescresacrearerereseare 2386 CTGTCTGGCACCTCCCAGCCATCCCTGTCTGCTGT 2557 GTCTACCGCCACGAATCCCAGGCGCACAGTTGTCCAACCTGCGTG. 2731 CTGGGCCTTGCGGATCGTTTCGAACTCATCGAAGACAACTACGCAG 2791 2851 aredrecagaarédarresecégedeadagecegaadereagedes 2806 CCAGACTCTGTCATCGCGTTCCTGCGCGCGGCGAGCTTGGTAACCCTC 2971 CAGTACTACATGGGCTTGGCCGAAGAGCTGGTGCTGCTGGCACCC 2206 SCAACCTACTTTGCTGCAGCTCAAGCTGCTGCAGATGCTGTTGACG 2497 CGTCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGC 2617 cccredacacacacacaracaacacacararraacracaca 2506 gracacacararacraccarrarandercraeaacccaaacccaa 2677 rigerregegececa, acacegraga anacacece a con consequente con co rrrerradgaagcreccaecrecggcgregacarcrrcgcarcr 2140 rrcrgrgaagrggccaaagagaarggcargdargrcrrccgrgrgr 2029 SACGTOTOCOAGATGCCAACTCGACGCAGTCCTGGAGACCA 2200 GAGGGGCTATGGCTTATTCTGGTGATCTCTCTGATCAAATGAAA 2260 CTGGGACGCCCAACCAAGGTCACCCCAATCCTCCAAGGTTGTTGGCG cccccicciagradagracracaggaracarcagagaraccc BATCCGTGGGACAGGCTCGACGAGCTGCGCGAGGCGATGCCGAATG BATTACTACCTAAAGATGGCAGAGGAGATCGTCAAGTCTGGCGCTC CTCGTTGGTGCGGGTGTGGATCCAGAGACTTTGCTGCCGATCCAC GAGCCACTGCGCACCCGCGCACTGGAAGGCC 3016 Ŋ

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Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, P., Murphy, B., Perriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inferring nonneutral evolution from human-chimp-mouse orthologous
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Direct Submission
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
Location/Qualifiers
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/organism="Pan troglodytes"
/mol_type="genomic DNA"
/db_xrefe="taxon:9598"
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RESULT 4 AK077665 LOCUS DEFINITION

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The FANDW COMBOTIUM and the KIKEN Genome Exploration Research Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length CDNAs

Act 60,770 full-length CDNAs

Adachi, 1. Alzawa, K. Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hangaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiracka, T., Hirozane, T., Katoh, H., Kawai, J., Kouda, M., Katoh, H., Kawai, J., Kouda, M., Nakamira, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, H., Kowai, M., Ohsato, N., Okazaki, Y., Saito, R., Saito, R., Sakai, C., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sak
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                                                                                                                                                Craniata; Vertebrata; Euteleostomi,
Sciurognathi; Muridae; Murinae; Mus
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FUNCTIONAL annotation of a full-length mouse cDNA collection Nature 409, 685-690 (2001)
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                                                                                                                                                                                                                                                                                      cloning
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High-efficiency full-length CDNA
Meth. Enzymol. 303, 19-44 (1999)
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Rodentia;
AK077665.1 GI:26346580
HTC; CAP trapper.
Mus musculus (house mouse)
Mus musculus
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Mammalia, Eutheria;
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E/VERSGEGMICHLDNASAFQGAVISPHYDSLLVKVIAHGKDHPTAATKMSRALABFRV
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pyruvate decarboxylase (MGD|MGI:97520, GB|NM_008797
evidence: BLASTN, 99%, match=2877)"
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Pred. No. 8.9e-90;
0; Mismatches 838; Indels 21;
                                                                                                                                                                                                                                                                                                                                        xref="FANTOM_DB:5730513C12"
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URL:http://fantom.gsc.riken.go.jp/
Location/Qualifiers
1. .2877
                                                                                                                                                                             organism="Mus musculus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                xref="taxon:10090"
                                                                                                                                                                                                                             mol_type="mRNA"
strain="C57BL/6J"
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/note="putative"
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Candida tropicalis and Yarrowia lipolytica. Genomic inserts of 3 t 5 kb were prepared and both extremities were sequenced. See keywords for description of this sequence and for the sequence of the other extremity of this insert.

Location/Qualifiers

1. 1888
                                                                                                                                                                                                                                                                                                                                          /variety="lactis"
//da xef="taxon:28985"
/clone="BAABAB27F04"
/clone=lib="BABABB"
/complement(<2. .8866)
/note="similar to Saccharomyces cerevisiae ORF YBR218C
PYC2 ; pyruvate carboxylase 2 ]
similar to Saccharomyces cerevisiae ORF YGL062w [ PYC1
/couplement carboxylase 1 ]
/evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>AATTCTTAGTCGATAACCAAAACAGACATTACTTTATCGAAATTAACCCAAGAATTCAAG</u>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    675 ACAAAGTTTCAGCCAGAAACTTGCCTGAAAAGGCTAACGTTCCAGTTCCAGGTACTC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              395 CACCAGTCAAGGCGTACCTGGACATCGATGAAATTATCGGTGCAGCTAAAAAAGTTAAAG
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llarity 55.9%; Pred. No. 4.3e-45;
Conservative 0; Mismatches 374; Indels
                                                                                                                                                                                                                    /organism="Kluyveromyces lactis"
/mol_type="genomic DNA"
/strain="CLIB 210"
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Sucharyota; Pungi; Ascomycota; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Kluyveromyces.

I (bases 1 to 888)
Souciet, J. L., Aigle, M., Artiguenave, F., Blandin, G.,
Bolotin-Fukuhara, M., Bon, B., Brottier, P., Casaregola, S.,
de-Montigny, J., Dujon, B., Durrens, P., Lepingle, A., Llorente, B.,
Malpertuy, A., Neuvegilse, C., Ozier-Kalogeropoulos, O., Potier, S.,
Sautin, W., Tekala, F., Toffano-Nioche, C., Wesolowski-Louvel, M.,
Wincker, P. and Weissenbach, J.
Genonic exploration of the hemisscomycetous yeasts: 1. A set of
PEBS Lett. 487 (1), 3-12 (2000)
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Submitted (08-SEP-2000) Genoscope - Centre National de Sequencage,
2 rue Gaston Cremieux, CP 5706, 91057 EVRY cedex, FRANCE. (E-mail
seqref@genoscope.cns.fr / Web : www.genoscope.cns.fr)
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Bolotin-Fukuhara,M., Toffano-Nioche,C., Artiguenave,F.,
Buchateau-Nayen,G., Lemaire,M., Marmeisse,R., Montrocher,R.,
Robert,C., Termier,M., Winocker,P. and Wesolowski-Louvel,M.
Genomic exploration of the hemiascomycetous yeasts: 11.
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Unpublished (1999)
Contact: Kumar A.
Michael Snyder, Dept. of Mol. Cell. and Dev. Biology
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I (bases I to 903)

NH-MGC http://mgc.nci.nih.gov/.

In Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LIML)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC Clone distribution information can be found through the I.M.A.G.E. Consortium/LIML at:

http://image.llni.gov

Lication/Qualifiers

Location/Qualifiers
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            TTGAGCACACCGTGACTGAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCGCAGATGCGCT 1171
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                                                              TCGAACATACAATTACCGAAGAAATCACCGGTATCGATATCGTCGCTGCTCAAATCCAAA
                                                                                                                                                                      TGGCTGCTGGTGCAACCTTGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCCACG
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'dev_stage="adult, 36 yr"
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6185002"
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                                                                                                                                637 bp mRNA linear EST 15-NOV-2001 EST418309 Coccidioides immitis spherule cDNA library Coccidioides immitis cDNA clone CIAAB85 5' sequence, mRNA sequence. BF251052 BF251052.1 GI:16931195
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev stage="spherule"
/lab_host="SOLR"
/clone lib="coccidioides immitis spherule cDNA library"
/note="Vector: pBluescript SK(-); Site_1: EcoR1; Site_2
Xho1"
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Best Local Similarity 60.4%; Pred. No. 2.2e-40;
Matches 380; Conservative 0; Mismatches 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Coccidioides immitis"
/mol_type="mRXRX"
/db_xref="taxon:5501"
/clone="cIAAB85"
1484 CAACCAACATIGGTTTCTT 1502
                                        124
                                        142 AGACCAACATTCCCTTCCT
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                                                                                                                                                                                                                                                                                                                   /clone_lib="mtn-3xHA/lacZ Insertion Library, strain Y2278"
/note=Tvector: pHSS6-Sal; A yeast genomic DNA library
without 2 micron or mitochondrial DNA was prepared in
pHSS6-Sal; genomic DNA was size-fractionated (DNA of
roughly 2-3 kb in length) prior to choning. This library
was subsequently mutagenized with a mtn-3xHA/lacZ
minitransposon containing lacZ, URA3, and tet resistance.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                        organism="Saccharomyces cerevisiae"
mol type="genomic DNA"
strain="Y2278 - S288C background, cir(0) rho(0)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 859;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match 6.2%; Score 223.4; DB 28; Length Best Local Similarity 59.9%; Pred. No. 4.5e-41; Matches 407; Conservative 0; Mismatches 268; Indels
Yale University
P.O. Box 208103, New Haven, CT 06520-8103, USA
Tel: 203 432 9949
Email: 203 432 6161
Email: anuj.kumar@yale.edu
te of mIn-3x4A/lacZ insertion.
Seq primer: GGCCTTCTTTTGAAGTAC
Class: transposon-tagged.
                                                                                                                                                                                                                                                                                         db xref="taxon:4932"
lab host="E. coli"
                                                                                                                                                             transposon-tagged.
Location/Qualifiers
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GH08678.5prime GH Drosophila melanogaster head pOT2 Drosophila
melanogaster cDNA clone GH08678 5prime, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                    1081 GICTICATCGAAATGAACCCACGTATCCAGGTTGAGCACACCGTGACTGAAGAAGTCACC 1140
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961 CAGCATTTGGATCCAGAACTGCGTGATCGCATTTGTGCGGATGCAGTAAAGTTCTGCGC 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                            260 TACTTCATAGAAGTCAACTCCAGACTCCAAGTTGAGCATACAGTAACGGAAGAATTACA 319
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Drosophila melanogaster
Bukaryota, Metazoa, Arthropoda; Hexapoda; Insecta; Pterygota;
Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Byhydroidae; Drosophilidae; Drosophila.

(bases 1 to 675)
Harvey, D., Brokstein, P., Hong, L., Evans-Holm, M., Su, C., Tsang, G., Dopublished (2001)
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One Cyclotron Rd, Berkeley, CA 94720, USA
Fax: 510 486 6798
Email: http://www.fruitfly.org/EST, est@fruitfly.berkeley.edu
Plate: 86 row: G column: 6
High quality sequence stop: 588.
10.675
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AI109467.1 GI:3477791
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AUTHORS
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IMAGE:6865891 5', mRNA sequence.
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Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Martha Rebbert, Steven L. Klein, Ph.D.

Tissue Procurement: Martha Rebbert, Steven L. Klein, Ph.D.

Tissue Procurement: Martha Rebbert, Steven L. Klein, Ph.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)

DNA Sequencing by: Agencourt Blossience Corporation

Clone distribution: NI-CGAP clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM1488 row: p column: 18

High quality sequence stop: 649.
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/note: pcWv-SPORT6; Site_1: SalI;
/note: pcWv-SP
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              ATCCAGGITGAGCACACCGTGACTGAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCAG 1164
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1 (Dases 1 to 862)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

Tumor Ganer Institute, Cancer Genome Anatomy Project (CGAP), Unpublished (1997)
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6.0%; Score 216.6; DB 14; Length 862;
Best Local Similarity 56.7%; Pred. No. 1.8e-39;
Matches 421; Conservative 0; Mismatches 319; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1284 CCCAGATACCGGAACTATCACCGCGTACC 1312
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Xenopus laevis
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744 bp mRNA linear EST 26-JUN-2001
602889415F1 NCI_CGAP_Kid14 Mus musculus CDNA clone IMAGE:5044779
5', mRNA sequence.
BI103175
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0; Mismatches 271; Indels
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Best Local Similarity 58.9%;
Matches 392; Conservative (
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BI103175.1 GI:14554068

DEFINITION

ACCESSION VERSION

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2004
Mus musculus (house mouse)

Mus musculus (house mouse)

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Muxinae; Mus.

I (bases 1 to 744)

ORS NIH-MGC http://gac.ncl.nih.gov/.

E National Institutes of Health, Mammalian Gene Collection (MGC)

INDUDLISHED (1999)

TISSUE Procurement Jeffrey E. Green, M.D.

CONTACT: Schert Strausberg, Ph.D.

Tissue Procurement Jeffrey E. Green, M.D.

CONA Library Preparation: Life Technologies, Inc.

CONA Library Arrayed by: The I.M.A.G.E. Consortium (LIML)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:

http://image.llnl.gov

Plate: LiAMI112 row: m column: 04

High quality sequence stop: 737.

IURES

LOCATION CALLERININGER
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                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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/clone="TWAGE:5044779"
/lab_host="mind of try phage-resistant)"
/clone lib="NCI CGAP Kidi4"
/note="Organ: kidney; Vector: pCMV.SPORT6; Site_1: Not Site=2: Sall; Cloned unidirectionally. Primer: Oliqo Average innert size 1.75 kb. Constructed by Life Technologies. Note: this is a NCI_CGAP Library. |"
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/strain="FVB/N"
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BIG18593 640 bp mRNA linear BST 07-SEP-2001 RH49459.5prime RH Drosophila melanogaster normalized Head pFlc-1 Drosophila melanogaster cDNA clone RH49459 5 similar to BCDNA:GH66348: FBBAN0001516 GO: [pyruvate carboxylase (GO:0004736)] located on: 2R 46B14-46C1;: 08/19/2001, mRNA sequence.
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Drosophila melanogaster (fruit fly)

Drosophila melanogaster

Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta, Pterygota,

Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta, Pterygota,

Bopteral Endopterygota, Diptera, Brachycera, Muscomorpha,

Boptydroidea, Drosophilidae, Drosophila.

(bases 1 to 640)

Stapleton,M., Brokstein,P., Hong,L., Tyler,D., Berman,B.,

Carlson,J., Champe,M., Chavez,C., Dorsett,V., Farfan,D., Frise,E.,
                                                                                                                                                                                                                                                                                                                                             959
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                                                                                                                                                                                                     841 AACCCTCAGCATATTGAAGTGCAG-ATCCTTGGCGATCACACTGGAGAAGTTGTACACCT
                                                                                                                                4;
                                                            DB 14; Length 800;
                                                                                                                                Indels
                                                                Score 213.2; DB 14;
Pred. No. 1.1e-38;
0; Mismatches 273;
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BI618593.1 GI:15514118
                                                        5.9%;
ilarity 59.1%;
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Matches 401;
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1 (Jeases 1 to 800)

2 (Jeases 1 to 800)

3 NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

3 NIH-MGC http://mgc.nci.nih.gov/.

3 Contact: Daniela S. Gerhard, Ph.D.

3 Office of Cancer Genomics

3 National Cancer Genomics

3 National Cancer Institute / NIH

3 National Cancer Markitute / NIH

4 NA G.B. Consortium (LINL)

5 NA Library Arrayed by: The I.M.A.G.B. Consortium (LINL)

5 NA Library Arrayed by: The I.M.A.G.B. Consortium (LINL)

5 NA Library Arrayed by: The I.M.A.G.B. Consortium (LINL)

5 NATIONAL MARIOT FOW: Colone distribution information can be found through the I.M.A.G.B. Consortium/LINL at:

6 NAMIOT FOW: Colone distribution on the found through the I.M.A.G.B. Consortium/LINL at:

7 NAMIOT FOW: Colone distribution information can be found through the I.M.A.G.B. Consortium/LINL at:

8 NAMIOT FOW: Colone distribution information can be found through the I.M.A.G.B. Consortium/LINL at:

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191 GCTGACCCTAGTCGCACTAATACTCACTGGAGTACTACATGGGCTTAGCTGAAGAACTG 550
                                                                                                                                                                                                                                                                                                                                                        2422 CACACCCACGACACTGCGGGTGGCCAGCTGGCAACCTACTTTGCTGCAGCTCAAGCTGGT
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AGENCOURT_16368972 NIH_MGC_220 Homo sapiens cDNA clone
IMAGE:30707731 5', mRNA sequence.
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George,R., Gonzalez,M., Guarin,H., Harris,N., Li,P., Liao,G.,
Misra,S., Mungall,C.J., Nunoo,J., Pacleb,J., Paragas,V., Park,S.,
Phouanenavong,S., Wan,K., Yu,C., Lewis,S.E., Celniker,S. and
                                                                                                                                                                                                                                                                                                                                      /mol_type="mxNA"
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                                                                                                                                             Lawrence Berkeley National Lab
One Cyclotron Rd, Berkeley, CA 94720, USA
Pax: 510 468 198
Email: http://www.fruitfly.org/EST, est@fruitfly.berkeley.edu
hit genomic AE003831: arm:2R [4876906,5137815]
estimated-cyto:46B13-46E4: 08/19/2001
Plate: RH.494 row: E column: 11
High quality sequence stop: 543.
Location/Qualifiers
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/organism="Drosophila melanogaster"
                                                    Rubin, G.M.
BDGP/HHMI RH Drosophila EST Project
Unpublished (2001)
                                                                                                    Contact: Stapleton, M. BDGP
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/clone_lib="NCI_CGAP_Brn67"
/note="Organ: brain; Vector: pGMV-SPORT6; Site_1: NotI;
Site_2: Sall; cloned unidirectionally. Primer: Oligo dr.
Average insert size 2.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP_Library."
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/mol type="mRNA"
/db xref="taxon:9606"
/clone="IMAGE:4938203"
/tissue_type="anaplastic oligodendroglioma with lp/19q
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLAM10873 row: d column: 12
High quality sequence stop: 715.
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1 (Dases 1 to 715)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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1aevis CDNA clone XL077c10 5', mRNA sequence.
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Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
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The information of this clone is available through the following
URL.
                                                                                                                                                                                                                                                                                            361 GGTGTGCCATCCAGTGCCGGGTCACCACCGAGGACCCCGCGCGCAGCTTCCAGCCGGACA
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/dev stage="stage 25"
/clone_lib="NIBB Mochii normalized Xenopus tailbud
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1 (bases 1 to 641)
Kitayama,A., Terasaka,C., Mochii,M., Ueno,N., Shin-i,T. and
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Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kenopus laevis (African clawed frog)
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/mol_type="mRNA"
/db_xref="taxon:8355"
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Location/Qualifiers
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                                                                               841 AACCCTCAGCATATTGAAGTGCAGATCCTTGGCGATCACACTGGAGAAGTTG
Pred. No. 1.1e-36;
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